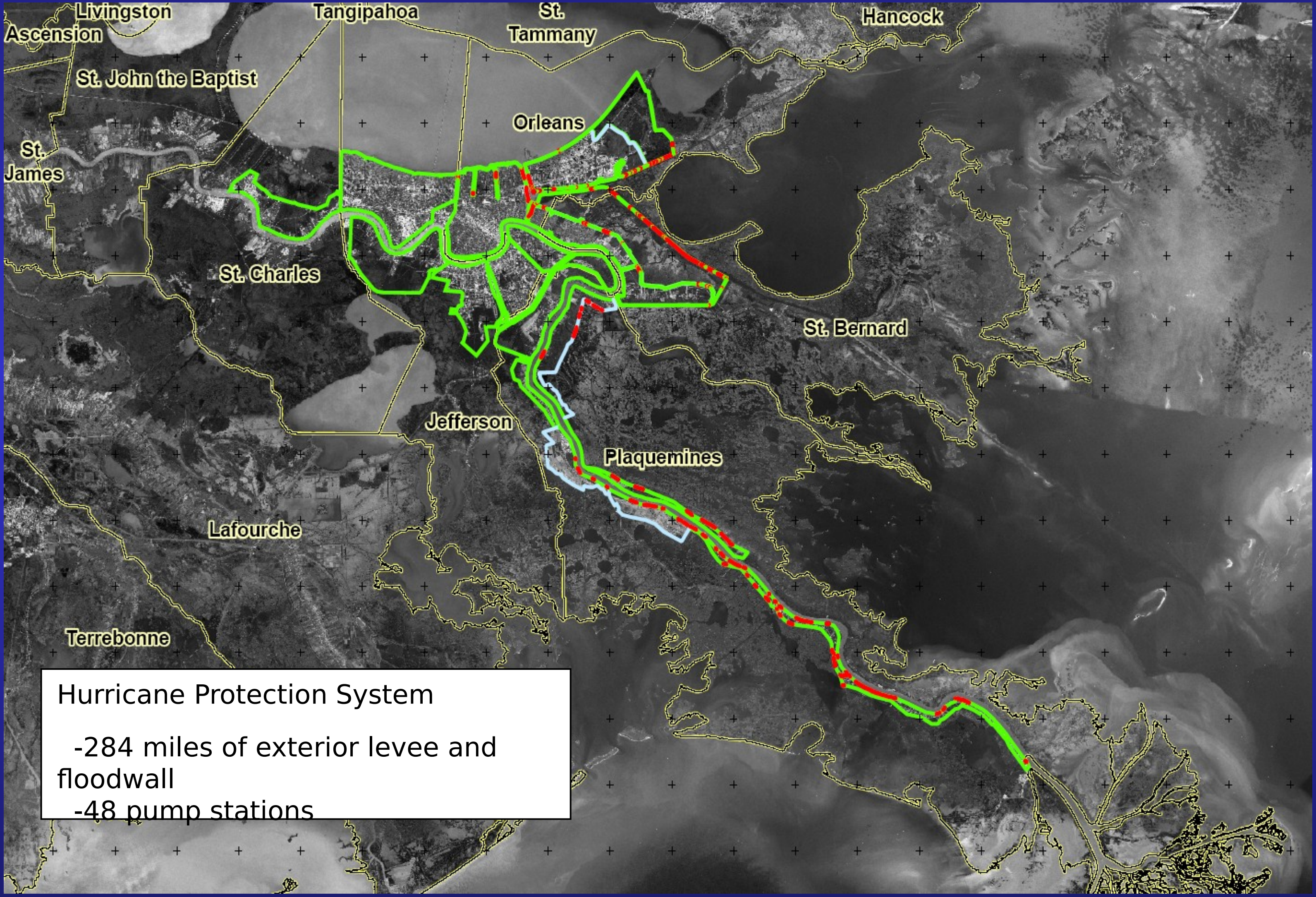
US Army Corps
of Engineers ®

Hurricanes Katrina and Rita:

The Unwatering of New Orleans

Affected Area


Livingston
Ascension
Tangipahoa
St. Tammany
Hancock
St. John the Baptist
Orleans
St. James
St. Charles
St. Bernard
Jefferson
Plaquemines
Lafourche
Terrebonne

Hurricane Protection System

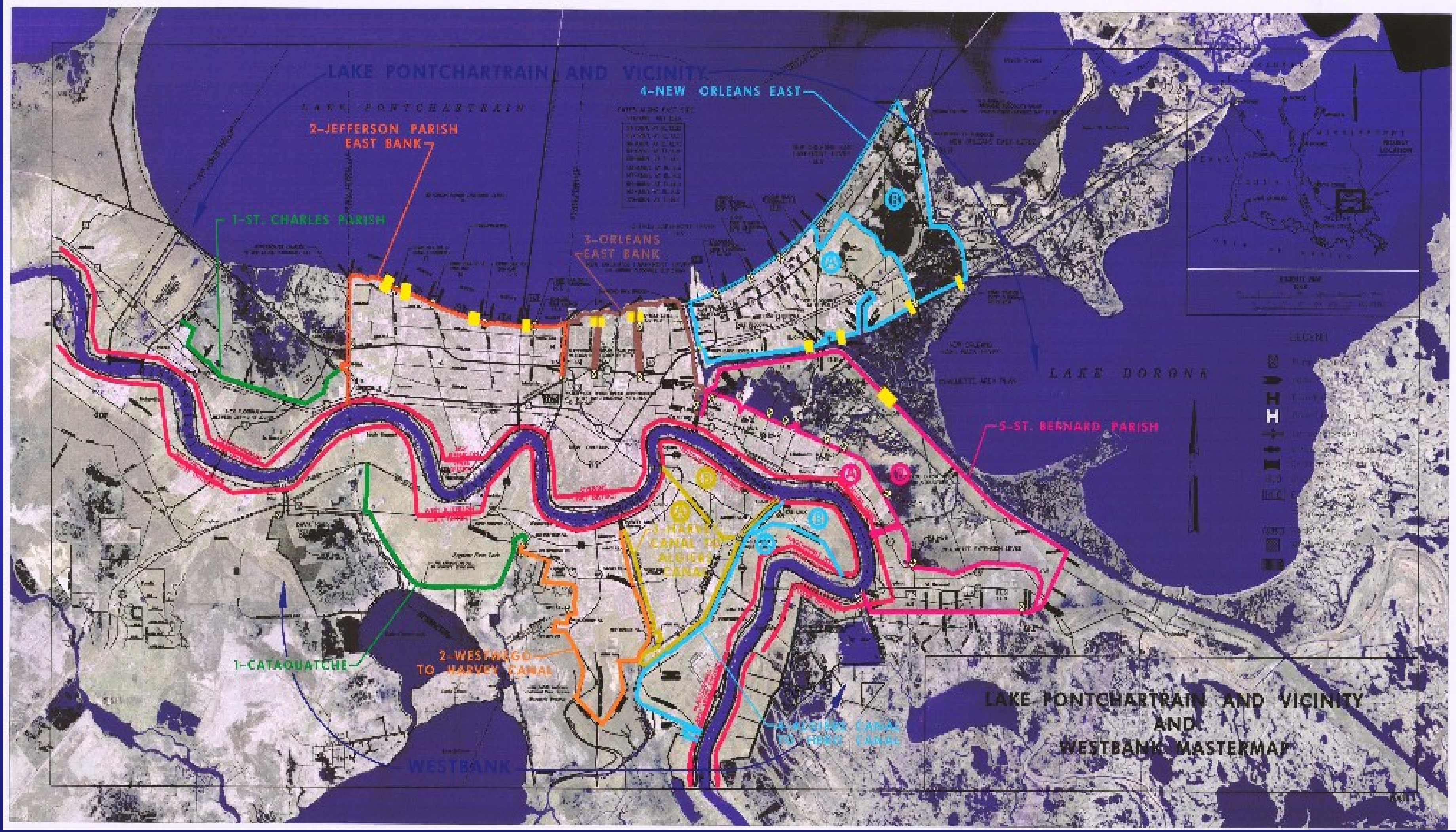
-284 miles of exterior levee and floodwall

-48 pump stations

US Army Corps
of Engineers ®

Affected Area

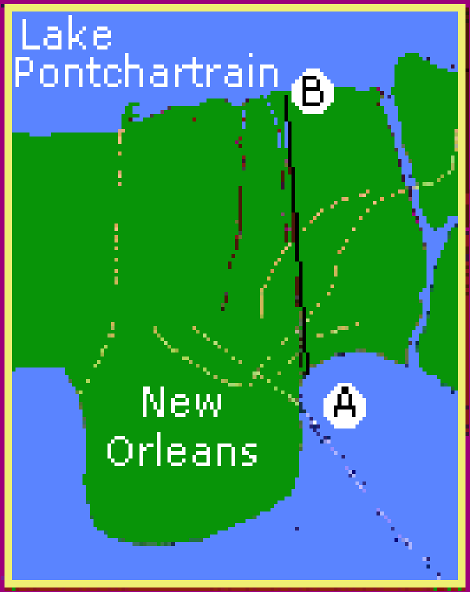
ST. PAUL • ROCK ISLAND • ST. LOUIS • MEMPHIS • VICKSBURG • NEW ORLEANS
HURRICANE KATRINA 2005
TASK FORCE HOPE

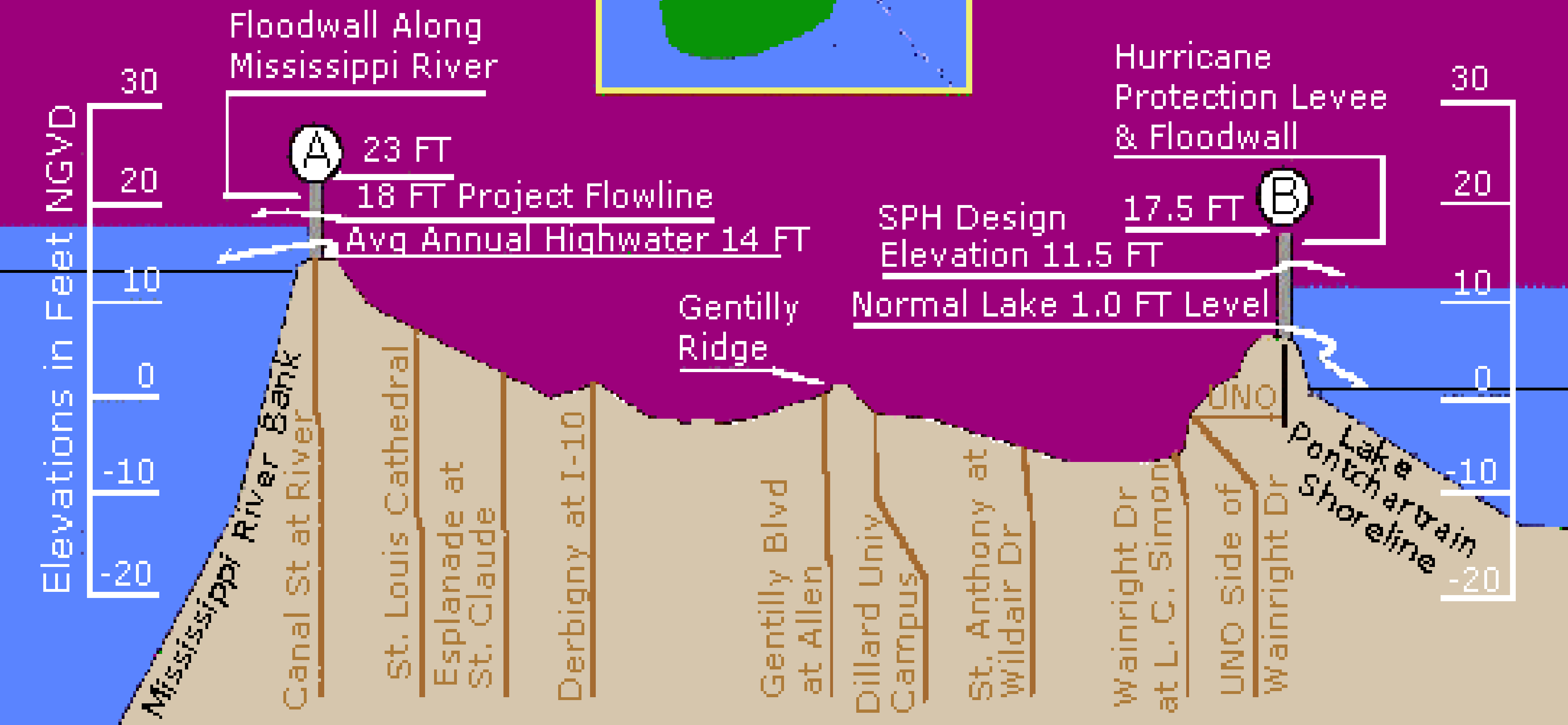

LAKE PONTCHARTRAIN AND VICINITY
LAKE PONTCHARTRAIN
4-NEW ORLEANS EAST
2-JEFFERSON PARISH EAST BANK
1-ST. CHARLES PARISH
3-ORLEANS EAST BANK
A
B
LAKE BORGNE
5-ST. BERNARD PARISH
LEGEND
3-HARVEY CANAL TO ALGIERS CANAL
2-WESTWEGO TO HARVEY CANAL
1-CATAOUATCHE
4-ALGIERS CANAL TO HERO CANAL
WESTBANK
LAKE PONTCHARTRAIN AND VICINITY AND WESTBANK MASTERMAP

City of New Orleans Ground Elevations

From Canal St. at Mississippi River to the Lakefront at U.N.O.

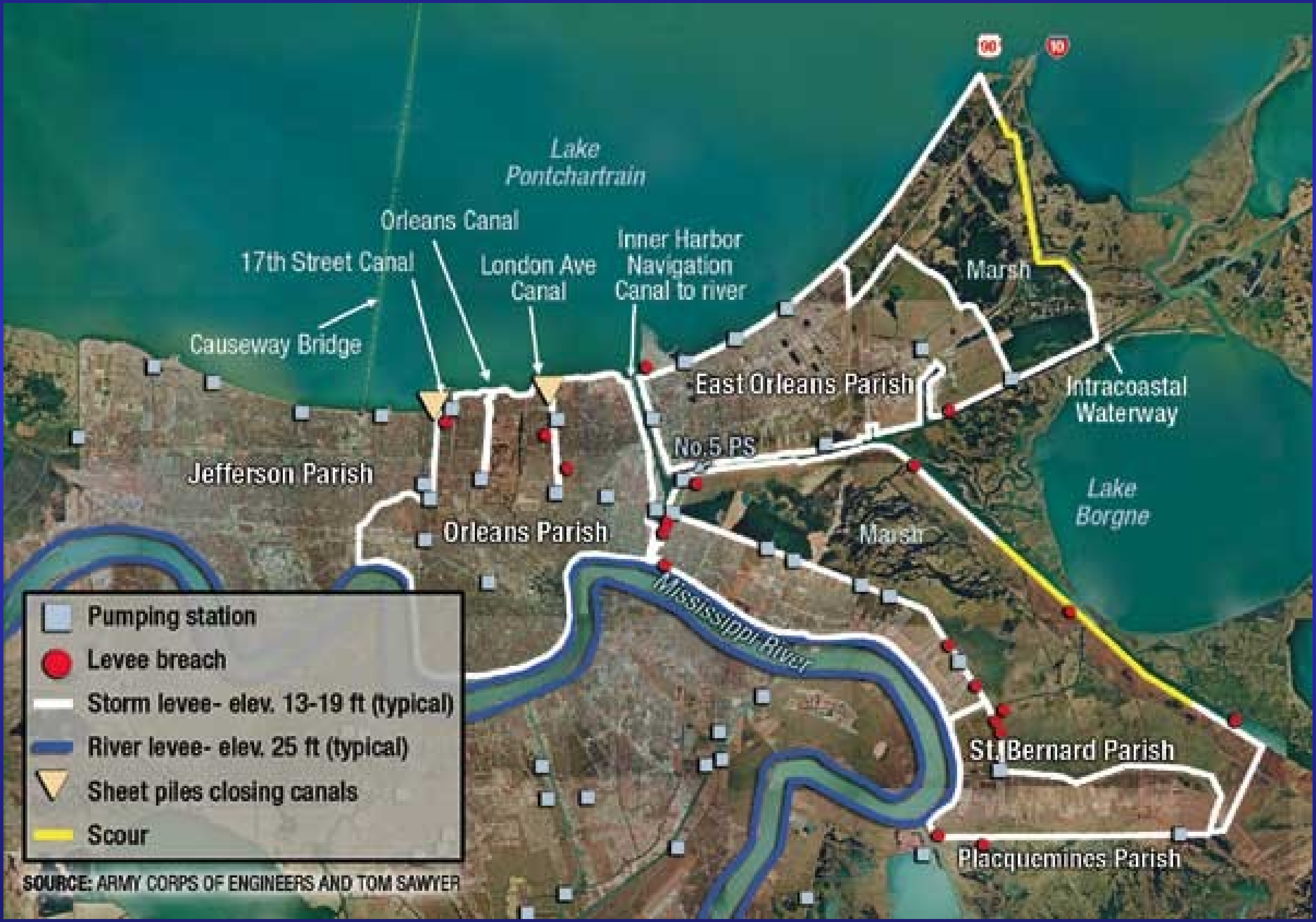
Area Map


Lake Pontchartrain
B
New Orleans
A


Floodwall Along Mississippi River
Hurricane Protection Levee & Floodwall
Elevations in Feet NGVD
30
20
10
0
-10
-20
A
23 FT
18 FT Project Flowline
Avg Annual Highwater 14 FT
B
17.5 FT
SPH Design Elevation 11.5 FT
Normal Lake 1.0 FT Level
Gentilly Ridge
UNO
Mississippi River Bank
Canal St at River
St. Louis Cathedral
Esplanade at St. Claude
Derbigny at I-10
Gentilly Blvd at Allen
Dillard Univ Campus
St. Anthony at Wildair Dr
Wainright Dr at L. C. Simon
UNO Side of Wainright Dr
Lake Pontchartrain Shoreline

US Army Corps
of Engineers ®

Metropolitan New Orleans


Lake Pontchartrain
Orleans Canal
17th Street Canal
London Ave Canal
Inner Harbor Navigation Canal to river
Causeway Bridge
East Orleans Parish
Marsh
Intracoastal Waterway
No.5 PS
Jefferson Parish
Orleans Parish
Lake Borgne
Marsh
Mississippi River
St. Bernard Parish
Placquemines Parish
90
10
Pumping station
Levee breach
Storm levee- elev. 13-19 ft (typical)
River levee- elev. 25 ft (typical)
Sheet piles closing canals
Scour

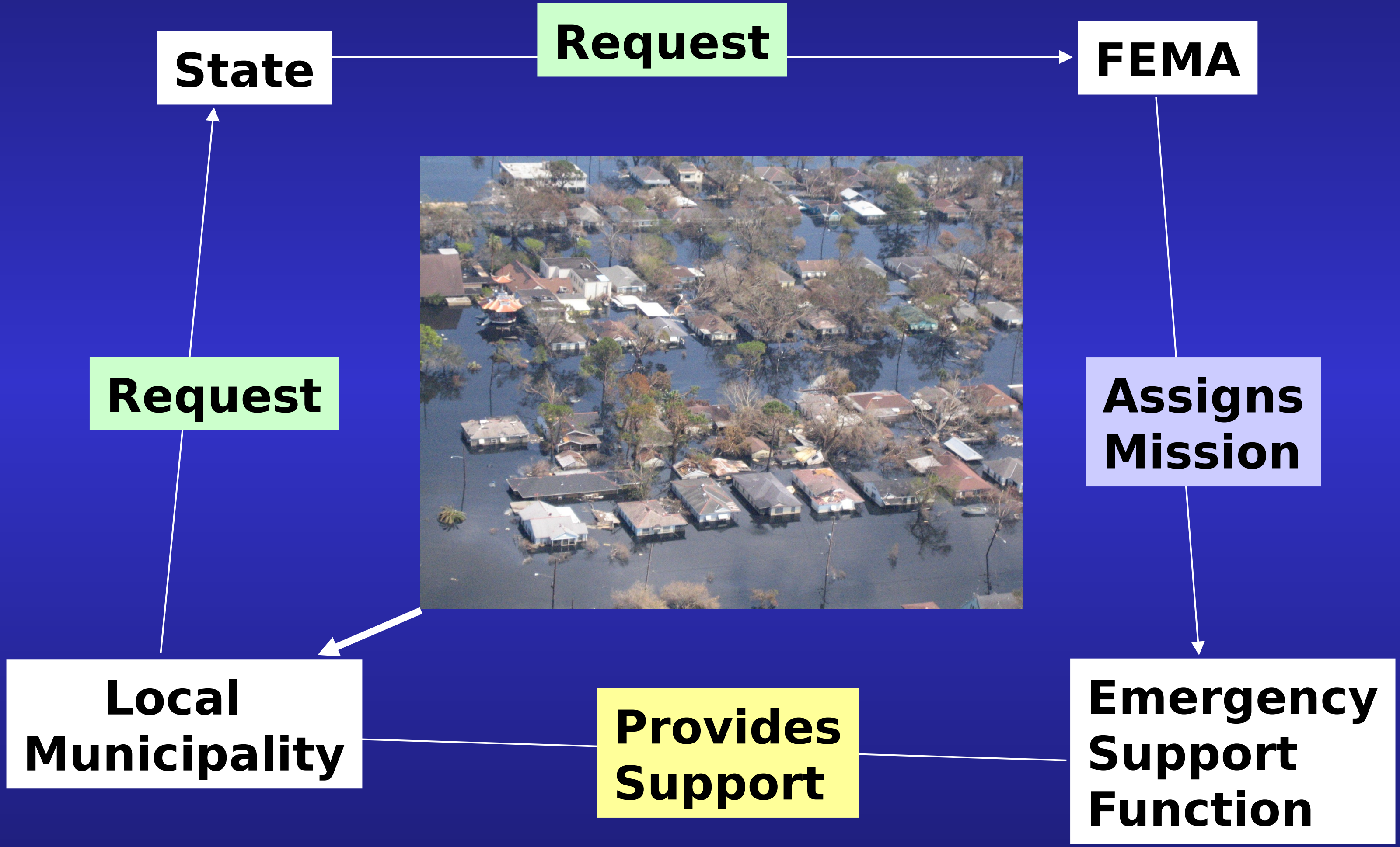
SOURCE: ARMY CORPS OF ENGINEERS AND TOM SAWYER

US Army Corps of Engineers ®

Drainage Canals

Pumping Stations

National Response Plan



State

Request

FEMA

Assigns Mission

Emergency Support Function

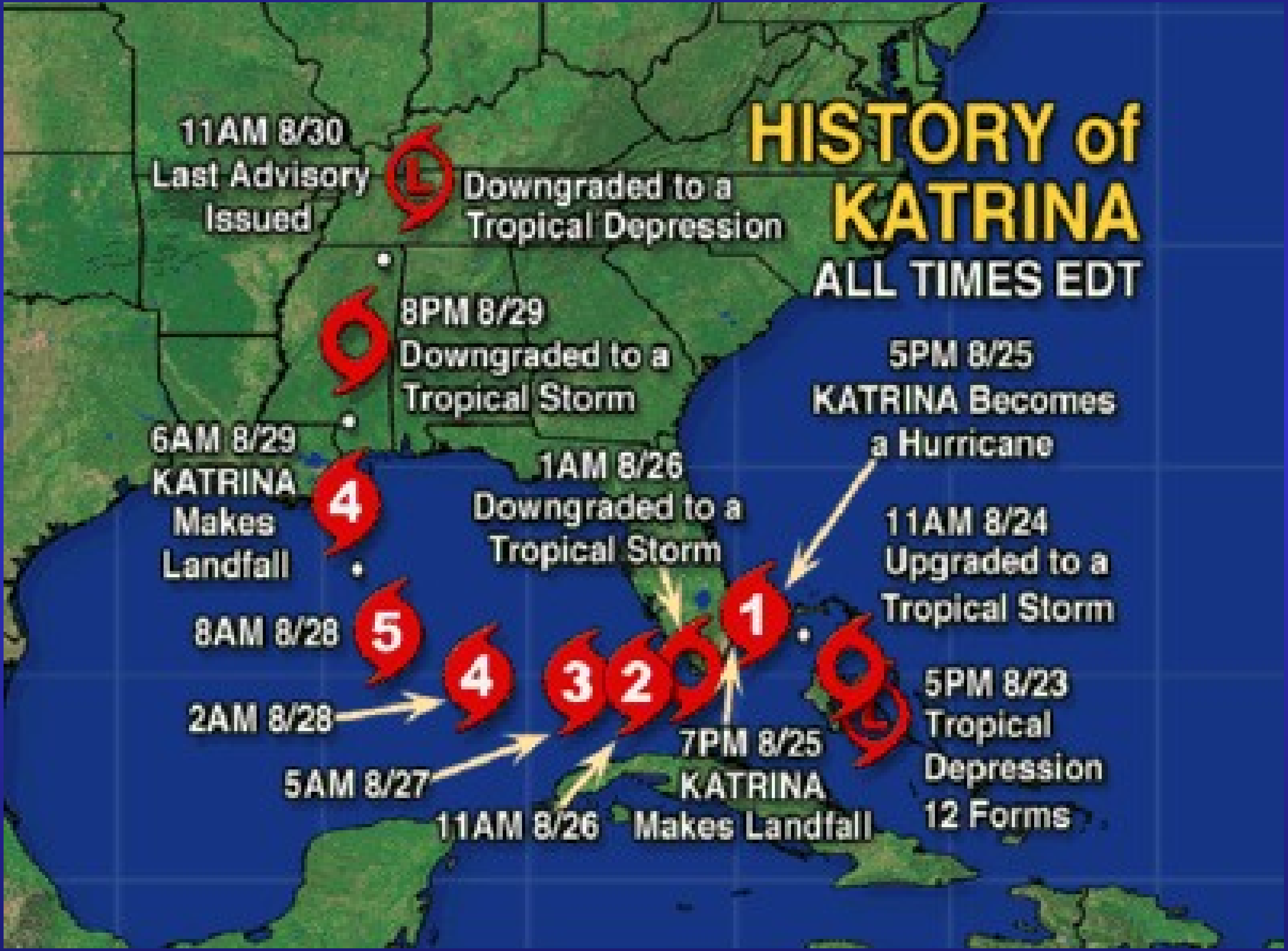
Provides Support

Local Municipality

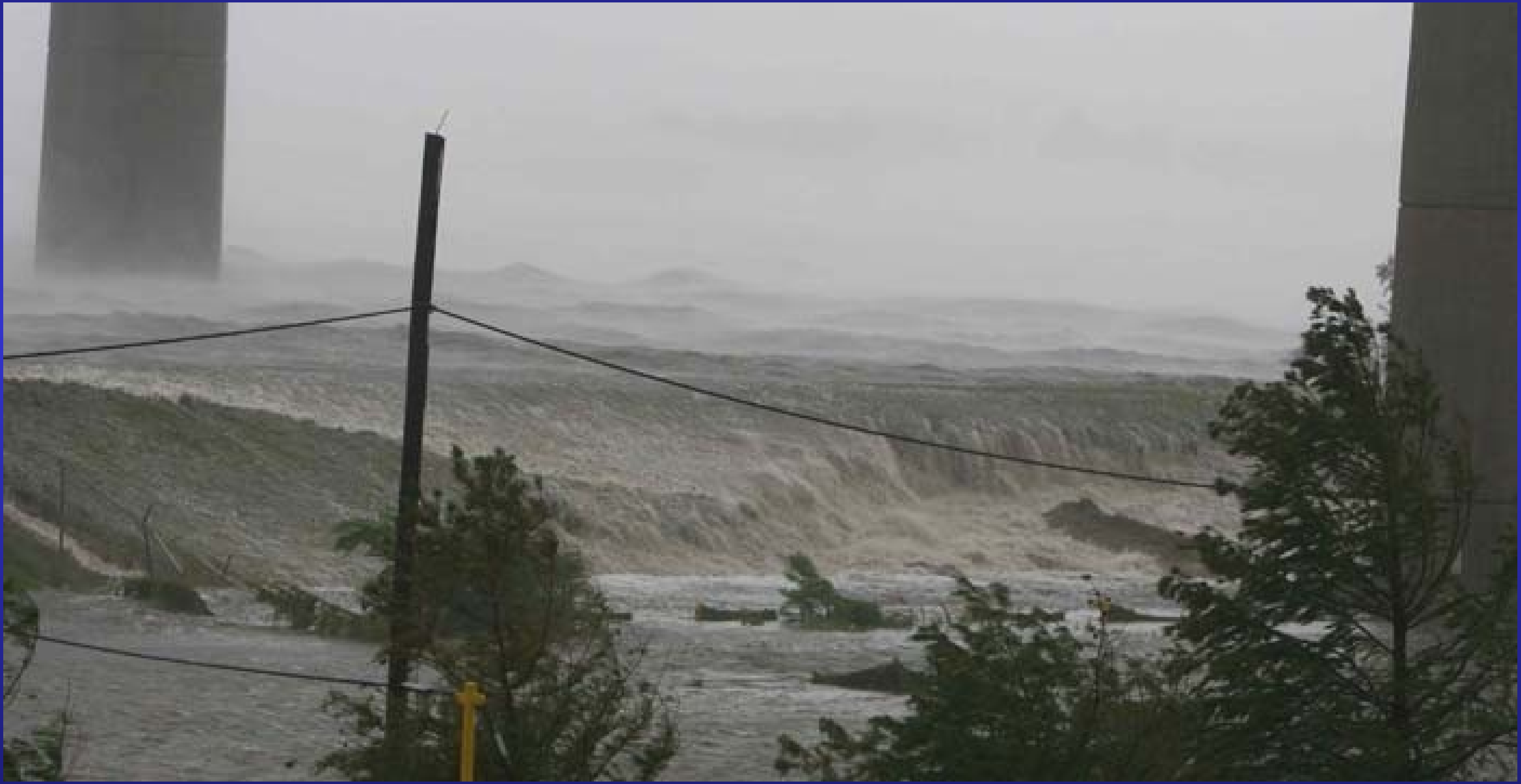
Request

US Army Corps
of Engineers ®

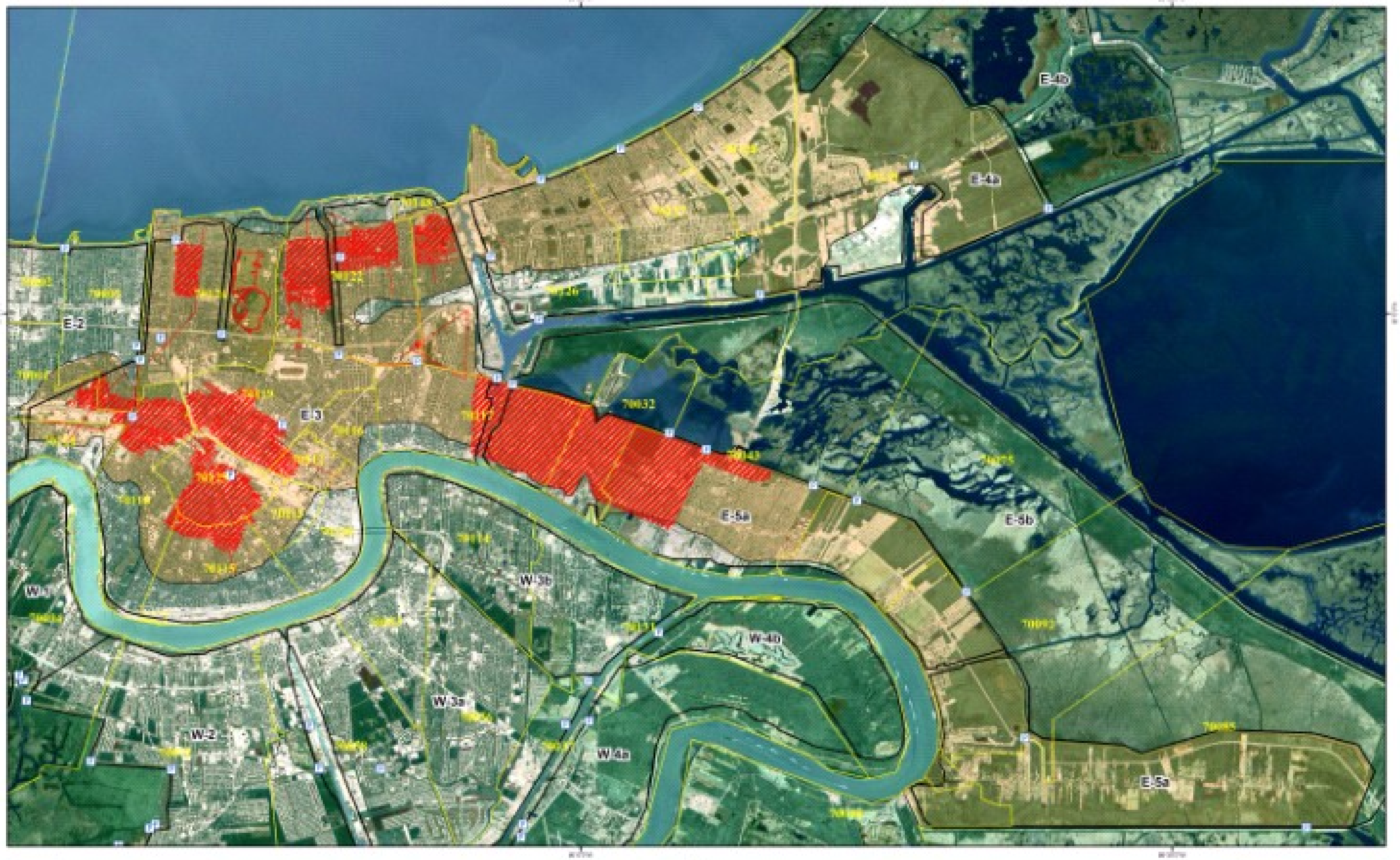
Hurricane Katrina


HISTORY of KATRINA
ALL TIMES EDT
11AM 8/30
Last Advisory Issued
L
Downgraded to a Tropical Depression
8PM 8/29
Downgraded to a Tropical Storm
6AM 8/29
KATRINA Makes Landfall
4
8AM 8/28
5
2AM 8/28
4
5AM 8/27
3
2
11AM 8/26
1AM 8/26
Downgraded to a Tropical Storm
1
7PM 8/25
KATRINA Makes Landfall
5PM 8/25
KATRINA Becomes a Hurricane
11AM 8/24
Upgraded to a Tropical Storm
5PM 8/23
Tropical Depression 12 Forms

Storm Surge



New Orleans Flooding


E-4b
E-4a
E-2
E-3
70032
E-5a
E-5b
W-1
W-3b
W-4b
W-3a
W-2
W-4a
E-5a

US Army Corps of Engineers.

SPHEROID: NORTH AMERICAN DATUM OF 1983
DATUM: WORLD GEODETIC SYSTEM 1984
PROJECTION: GEOGRAPHIC

PREPARED BY: THE TASK FORCE HOPE GEOSPATIAL TEAM
REVISED: 2005-09-26

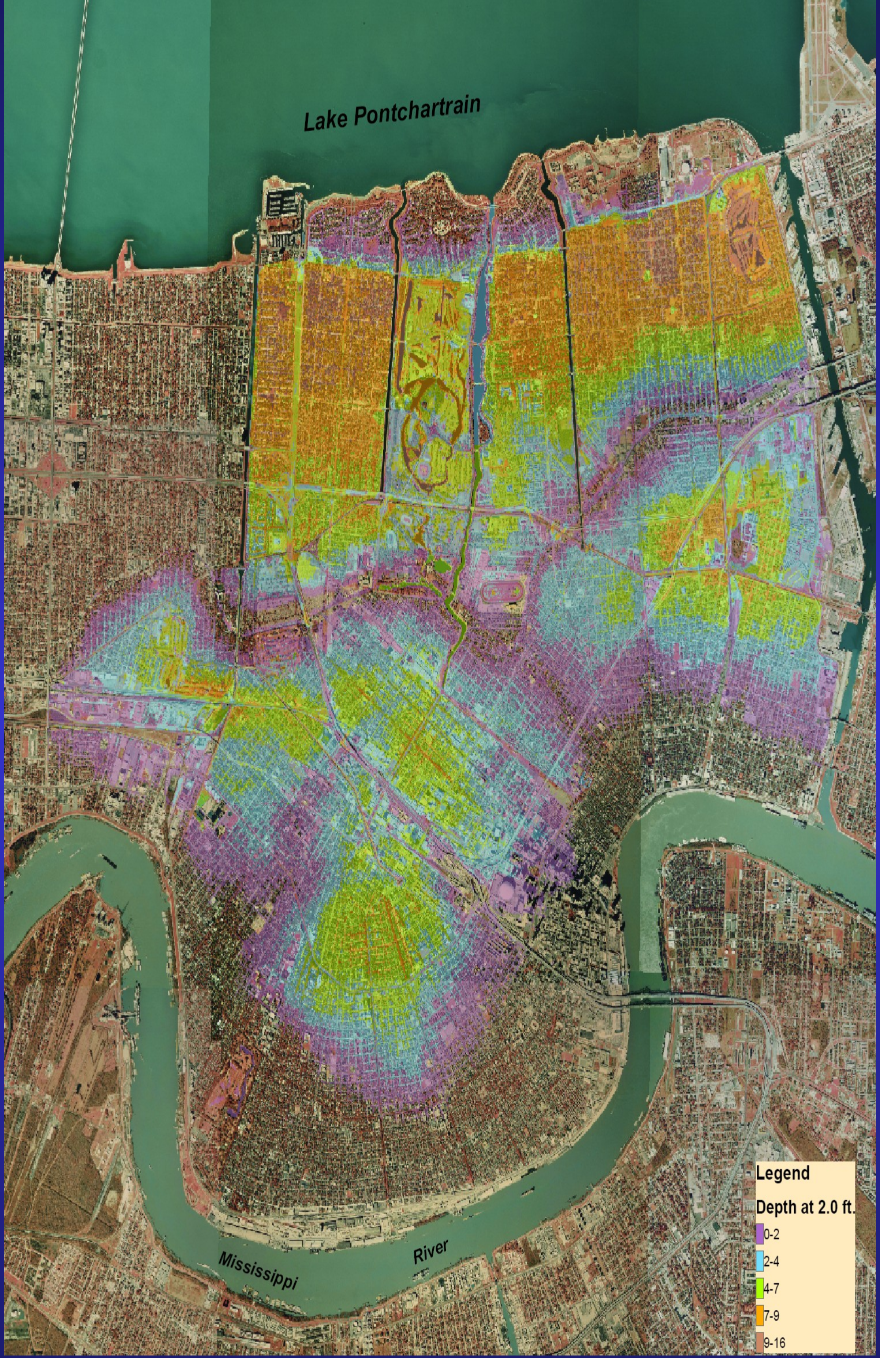
Scale: 1:85,000

Miles 0 1 2 3 4 5 6 7 8

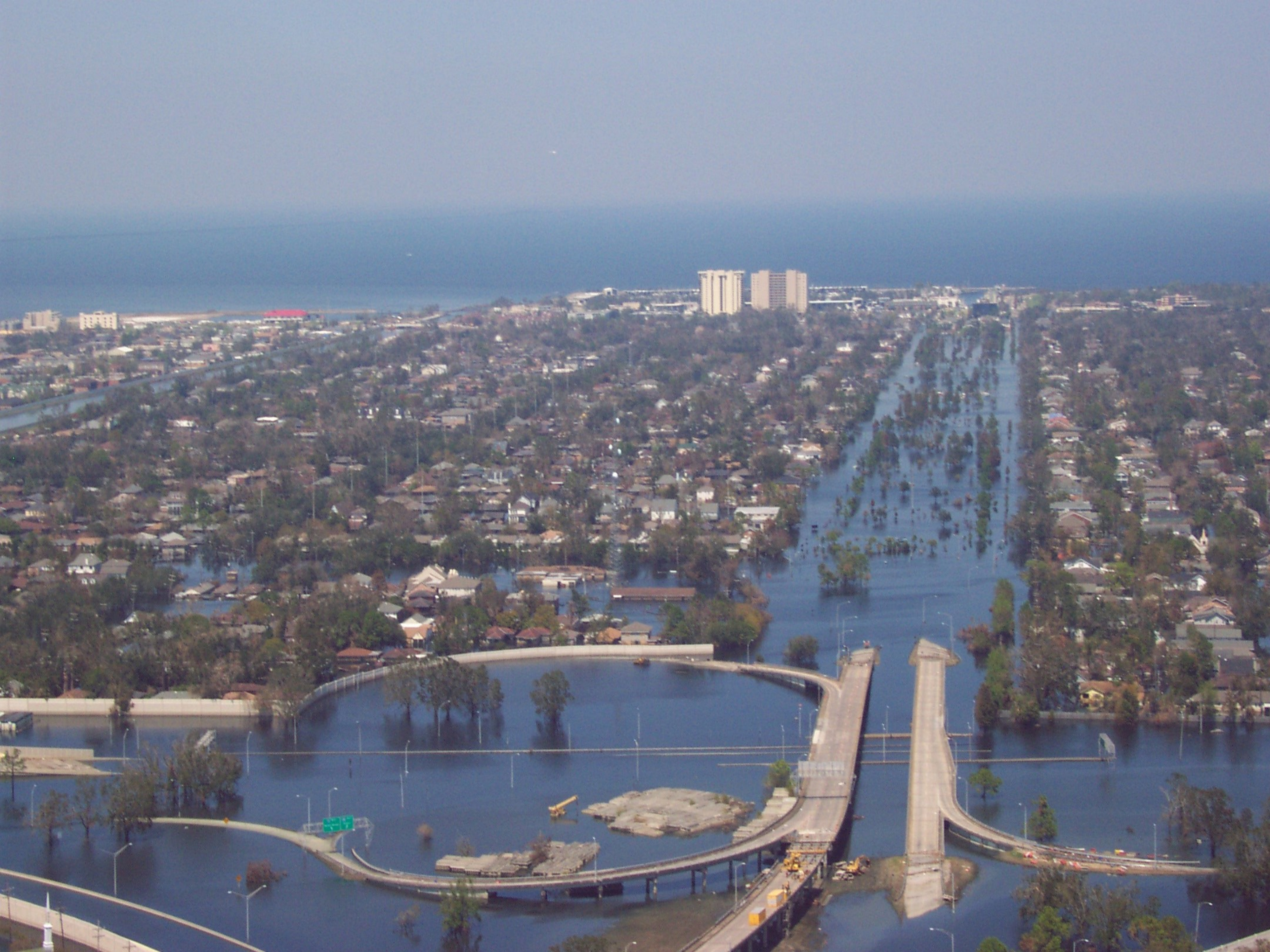
Kilometers 0 1 2 4 6 8 10

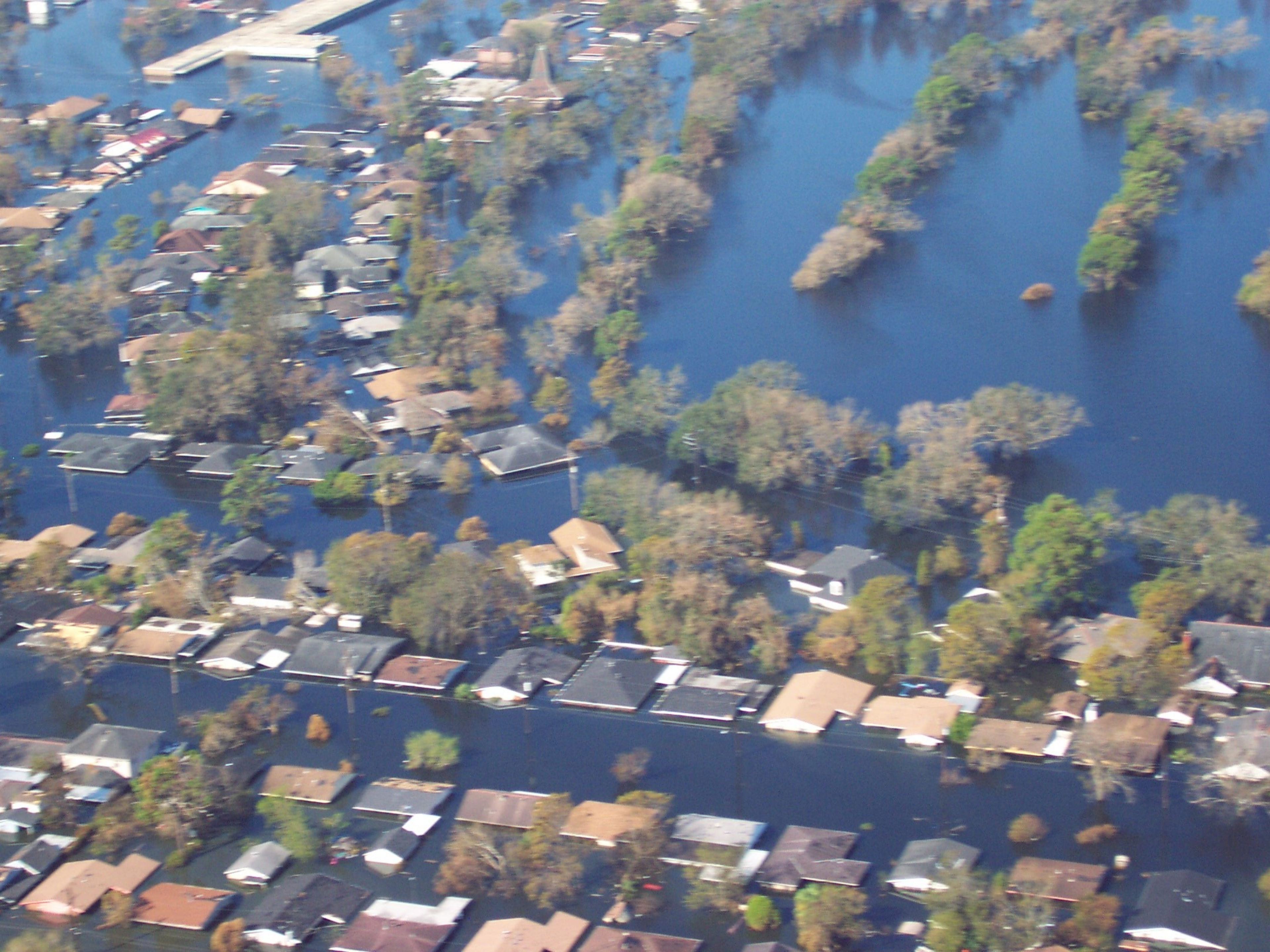
LEGEND

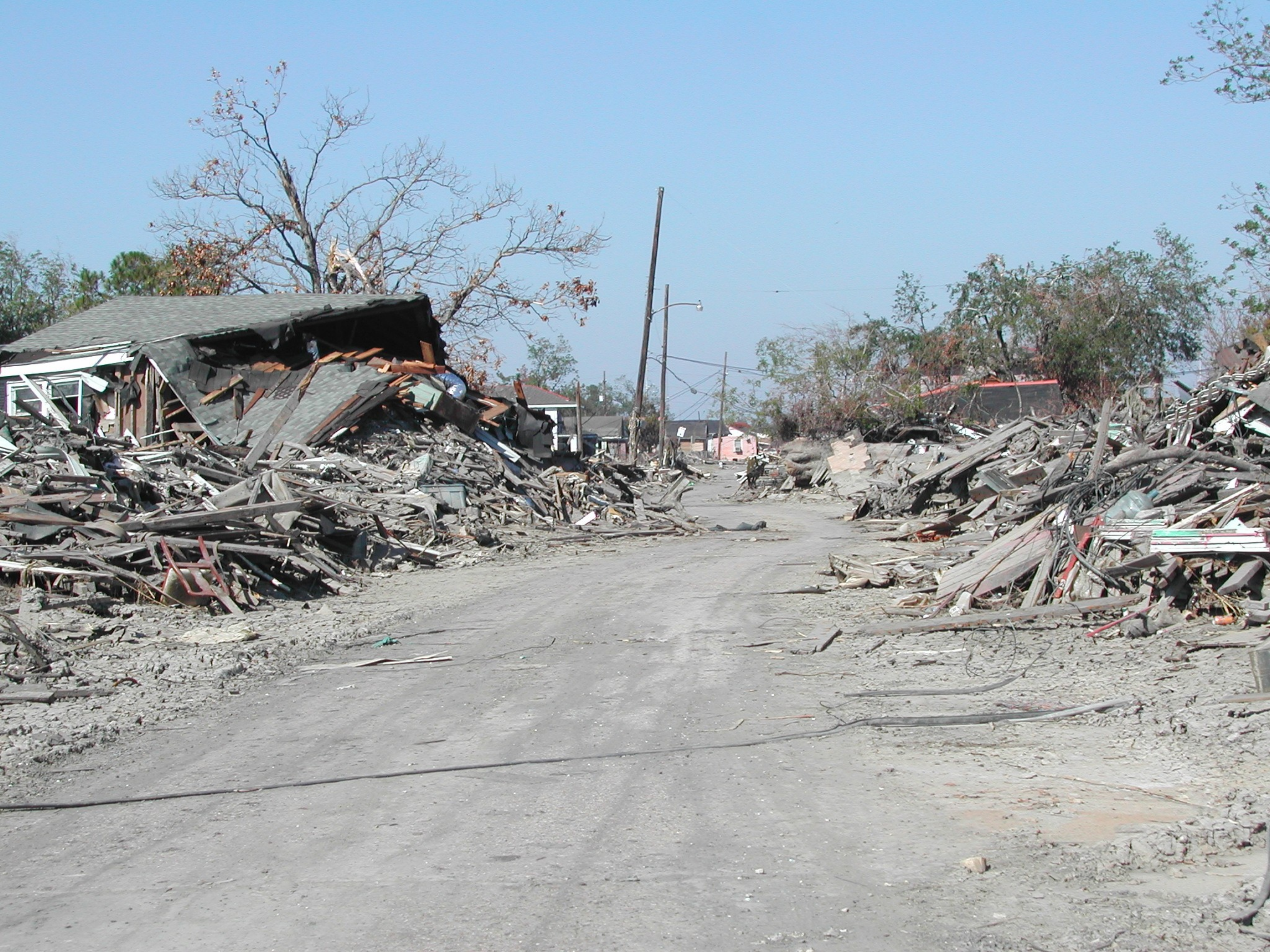
- PUMPING STATIONS
- 🟧 HURRICANE KATRINA FLOOD EXTENT
- 🟥 HURRICAN RITA PREDICTED FLOOD EXTENT
- ☐ LEVEE_DISTRICTS
- ☐ ZIP CODES

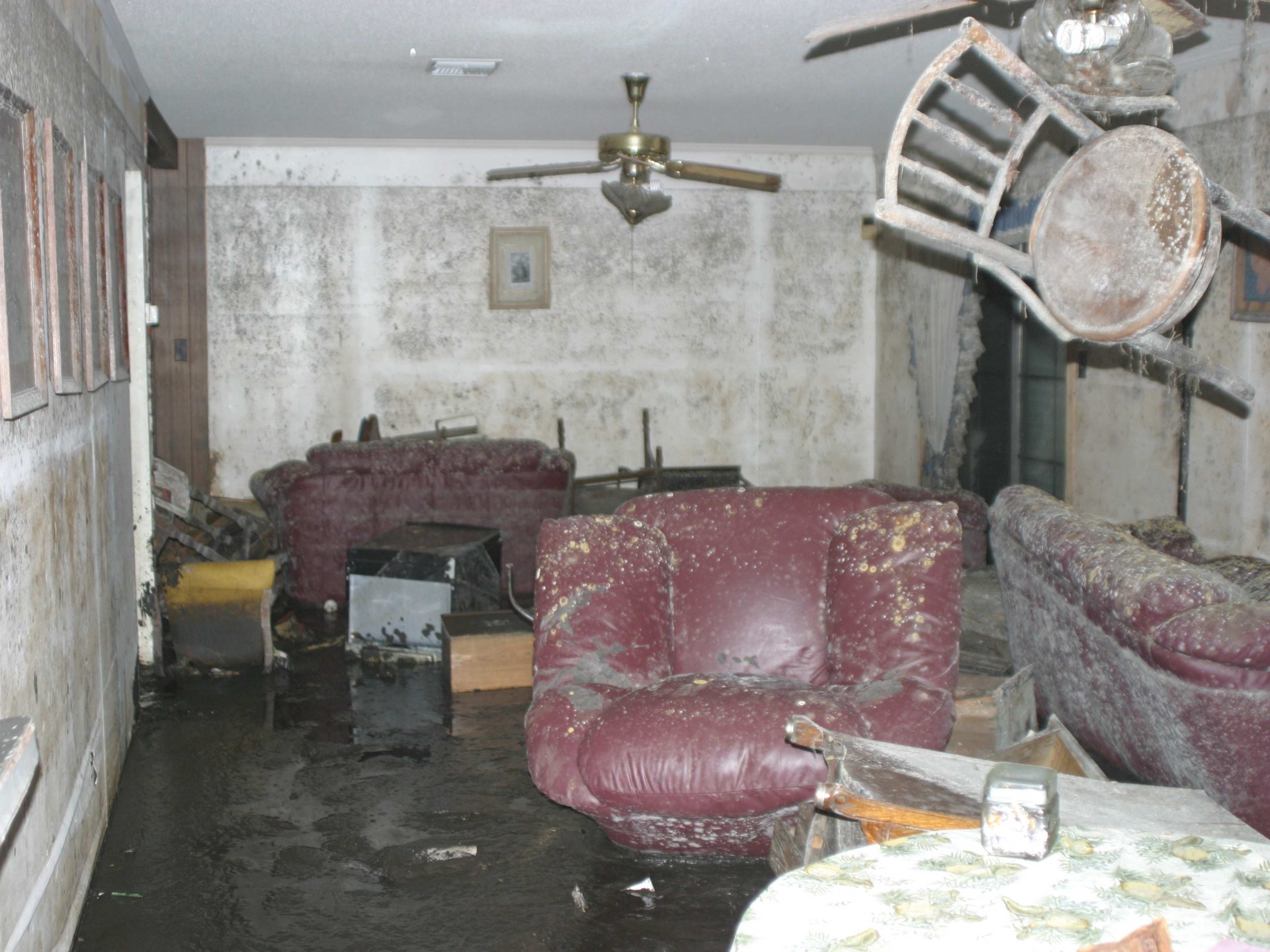

Lake Pontchartrain
Mississippi
River
Legend
Depth at 2.0 ft.
0-2
2-4
4-7
7-9
9-16

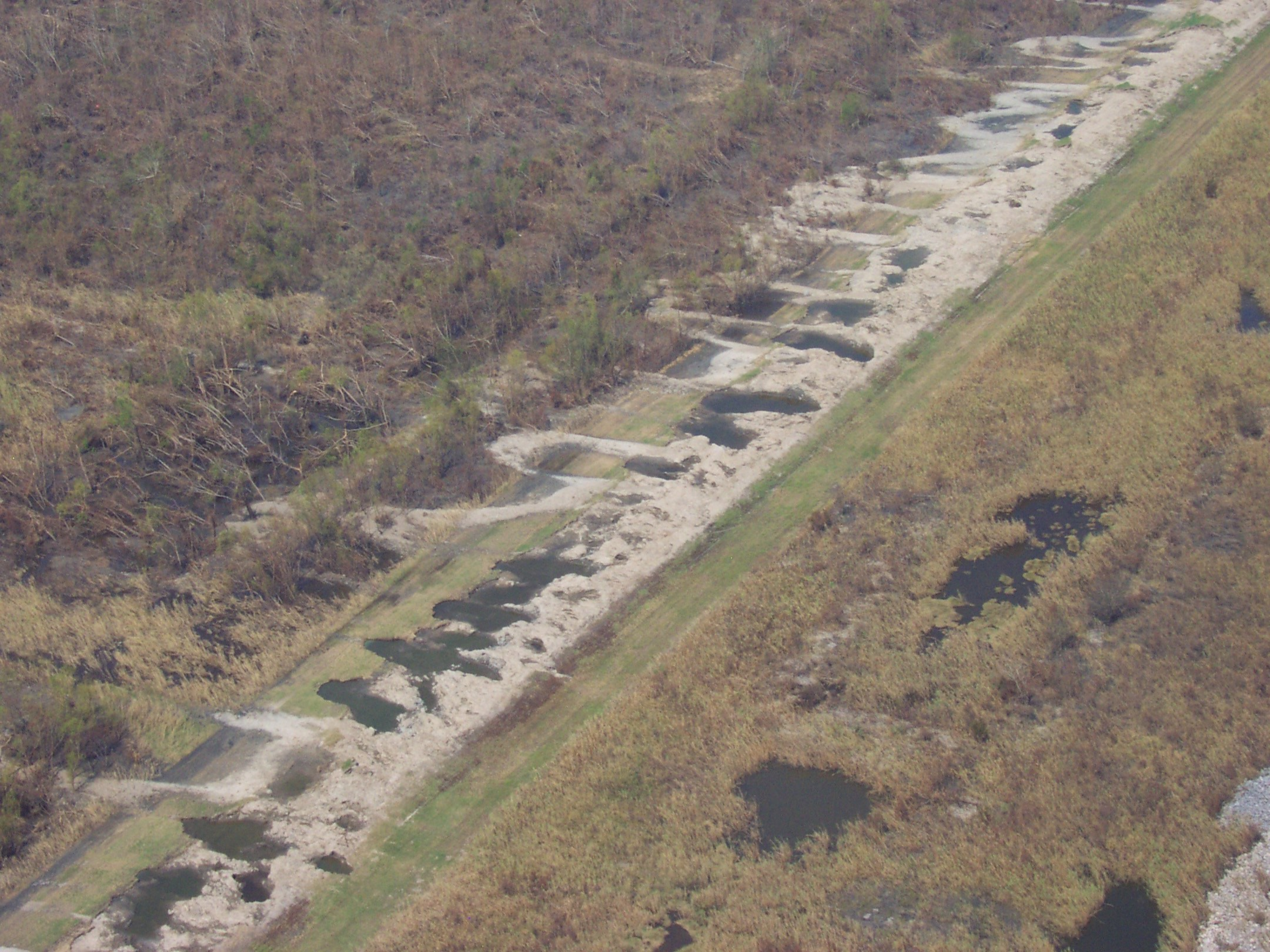
In the Aftermath

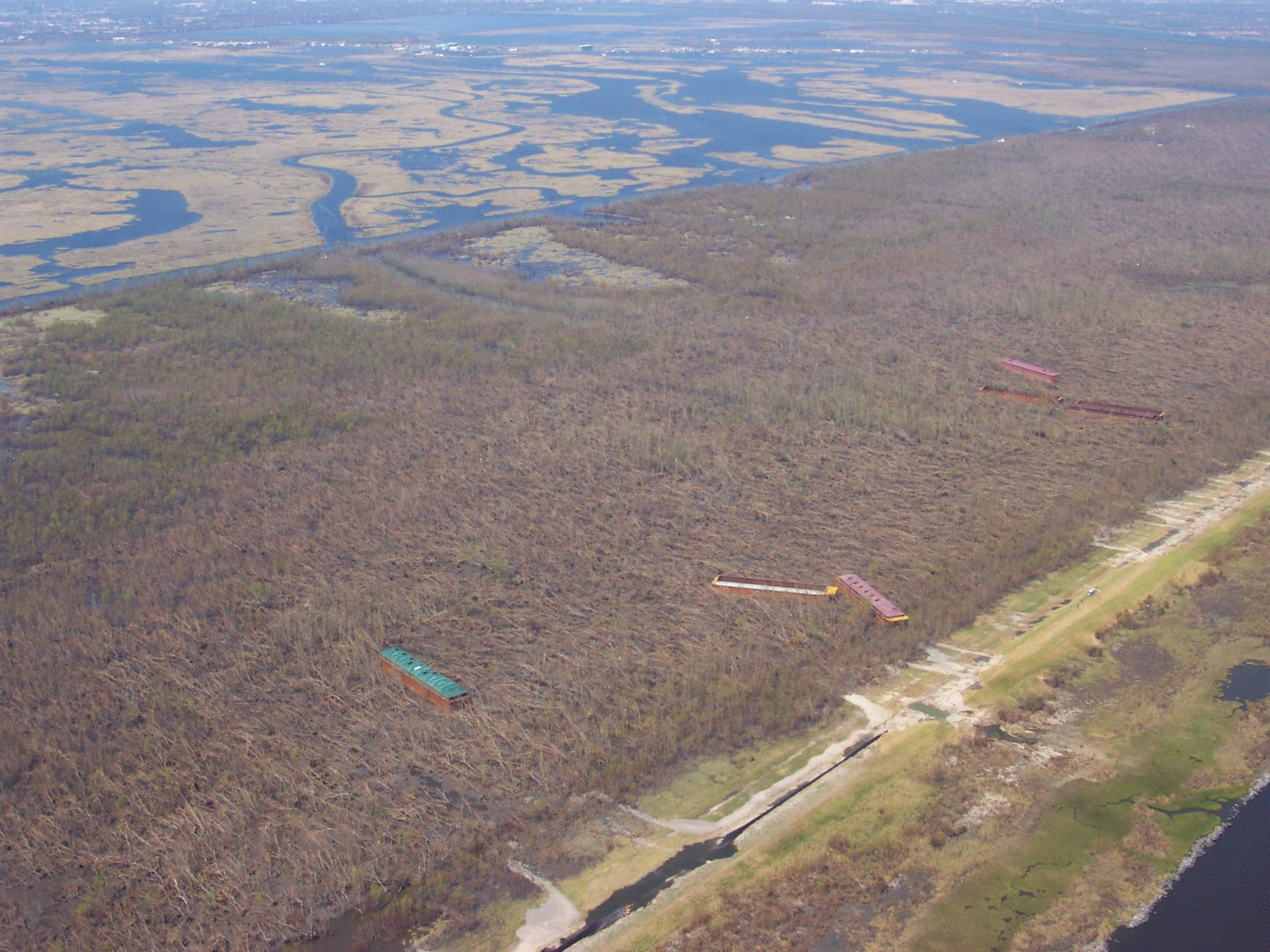


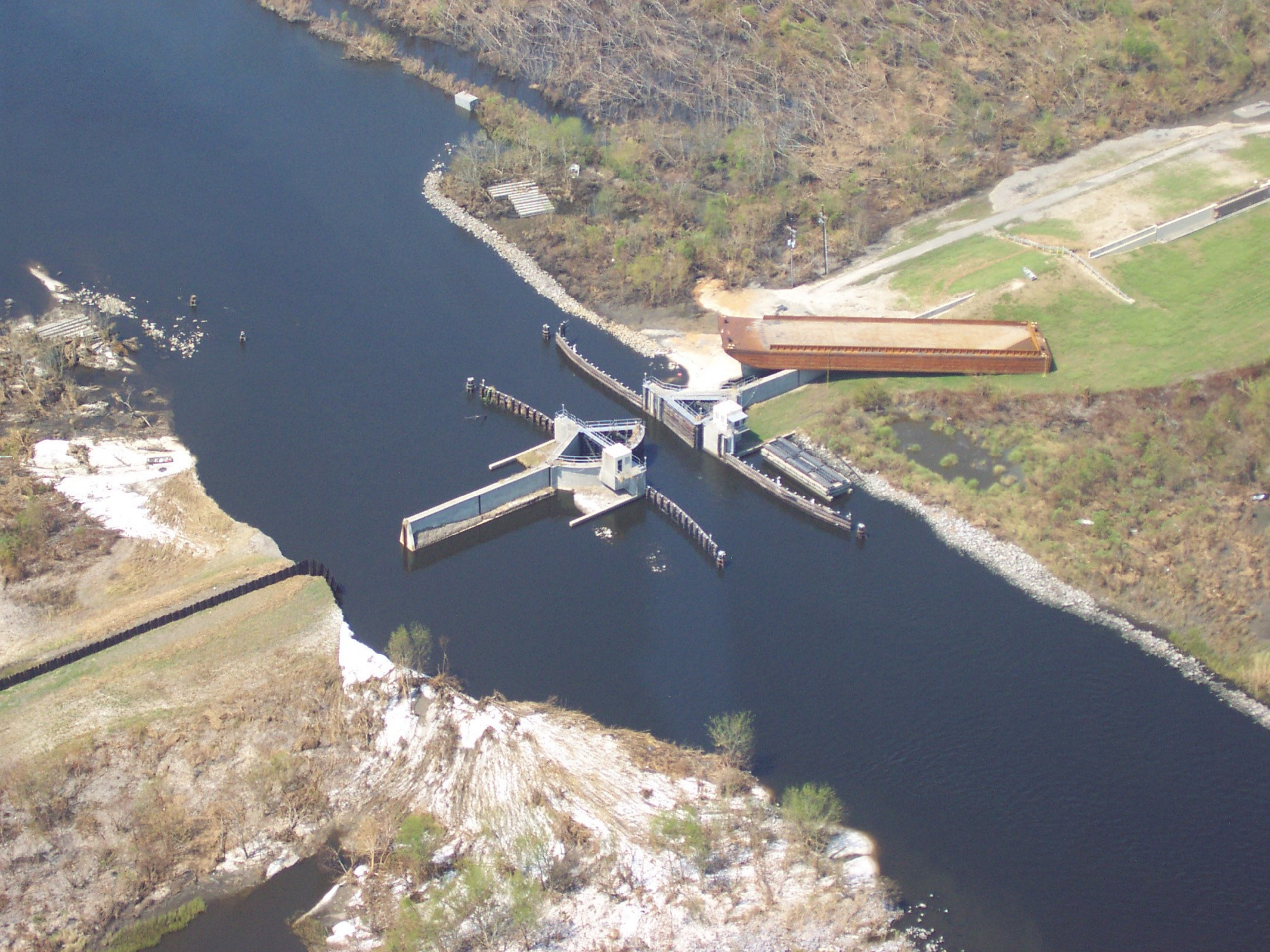




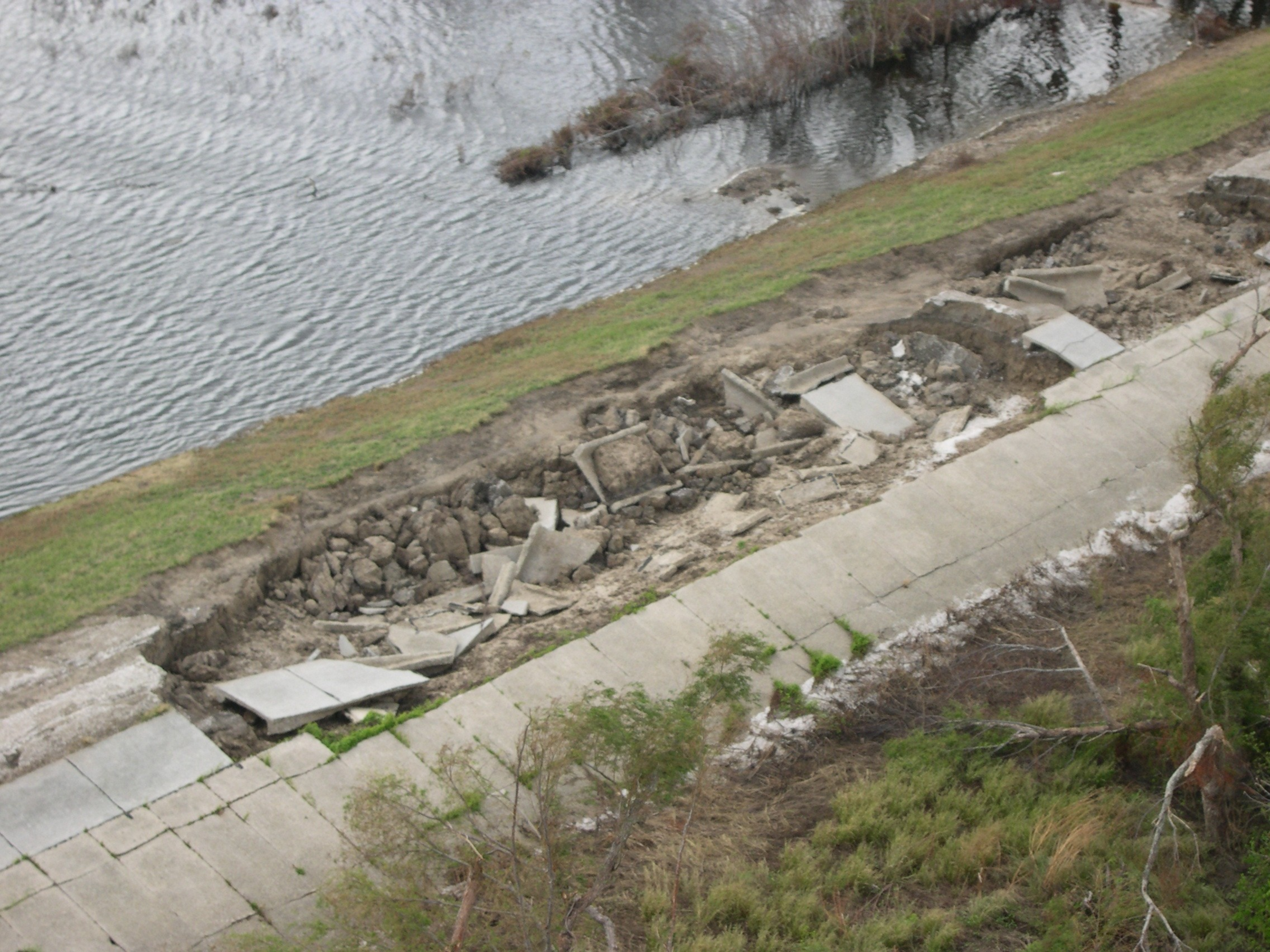








504
ING 4727
78



Task Force Unwatering

17TH ST
Status
Sandbags to 10'
? close canal
New Orleans East
UPDATED REPORTS
0700 UPDATE
PUMP REPORT

US Army Corps
of Engineers ®

Basic Strategy

Basic Strategy

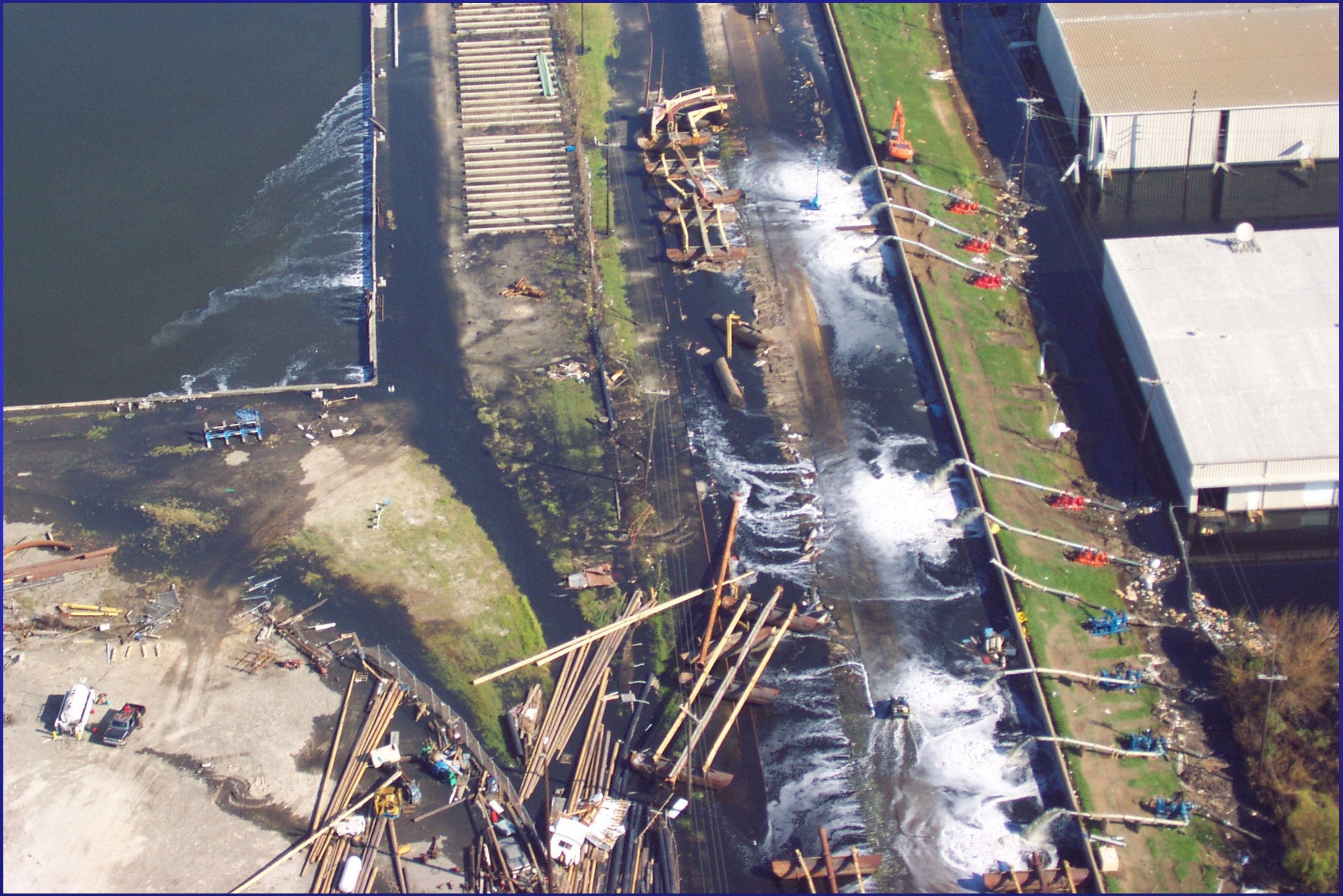
US Army Corps of Engineers
Emergency
Operations

US Army Corps
of Engineers ®

Basic Strategy

Basic Strategy

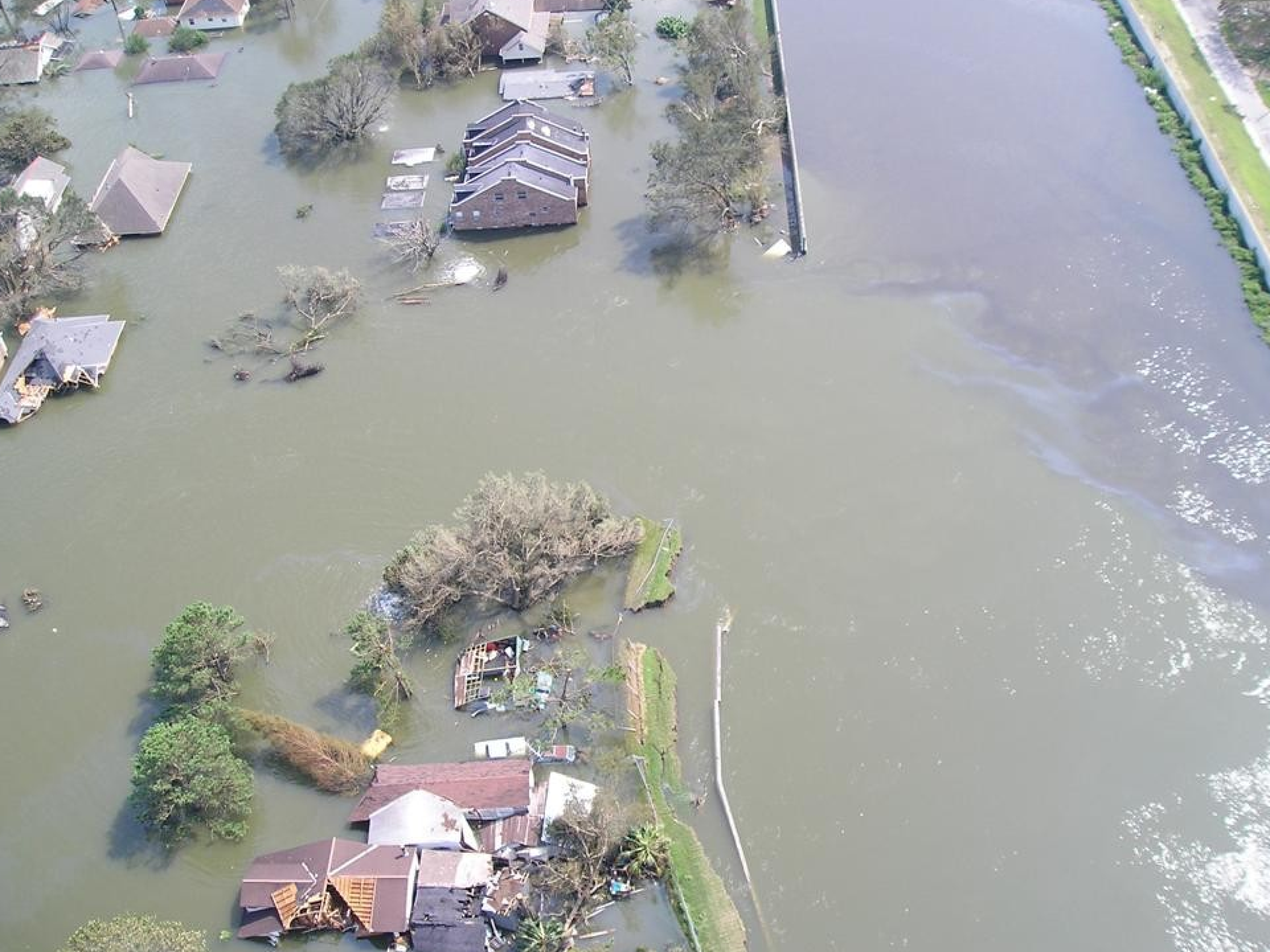
Basic Strategy

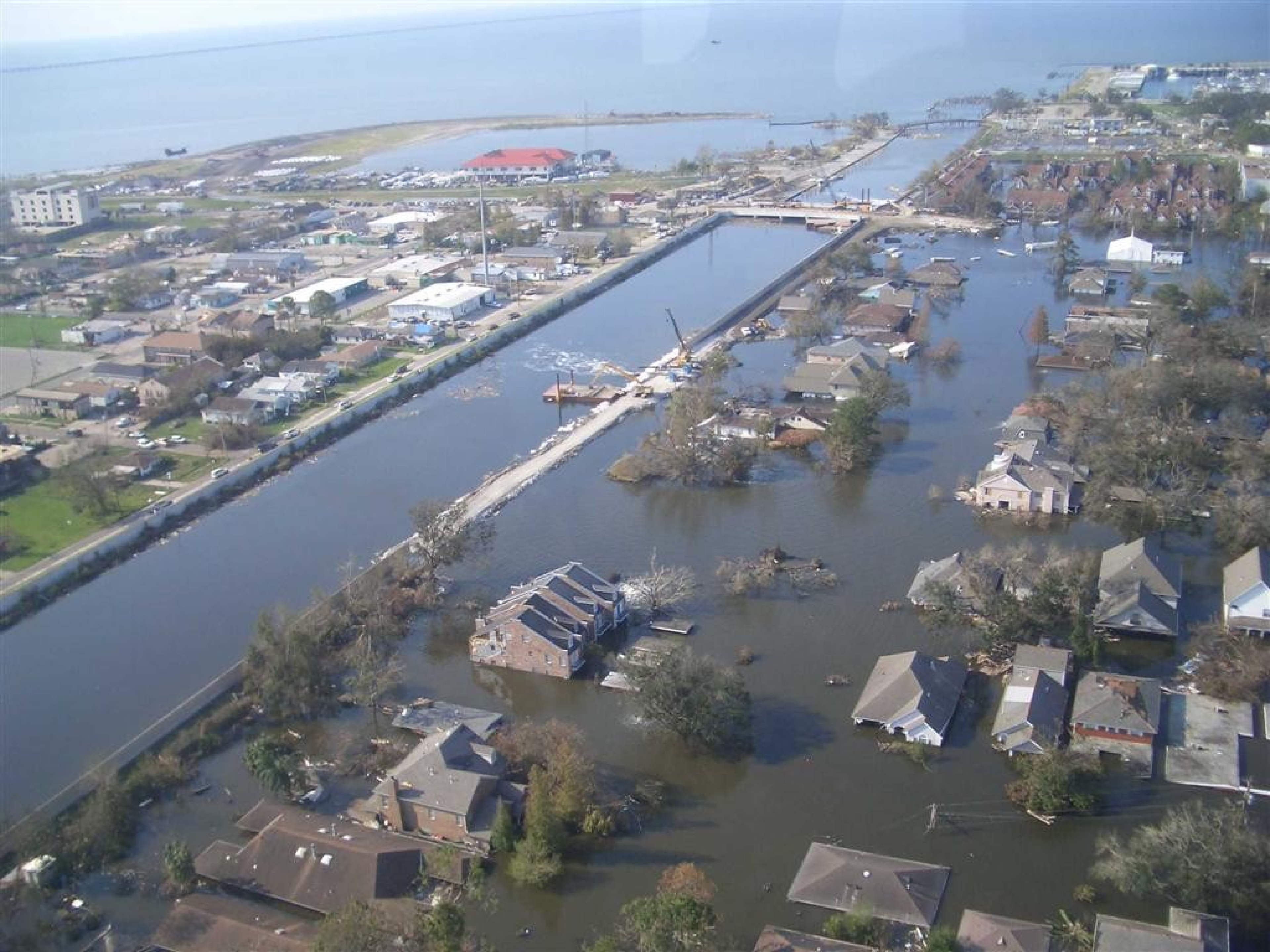


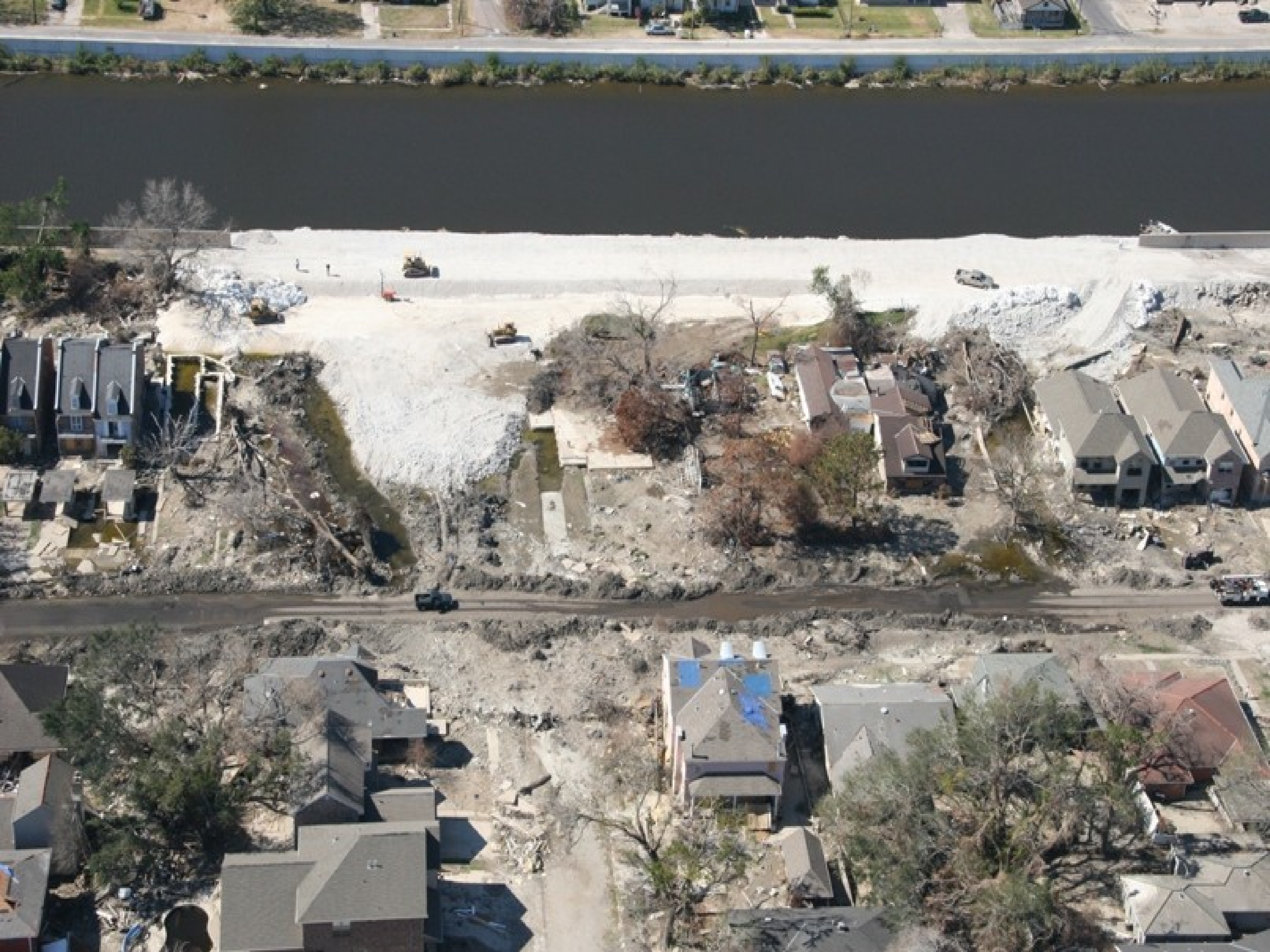
Basic Strategy

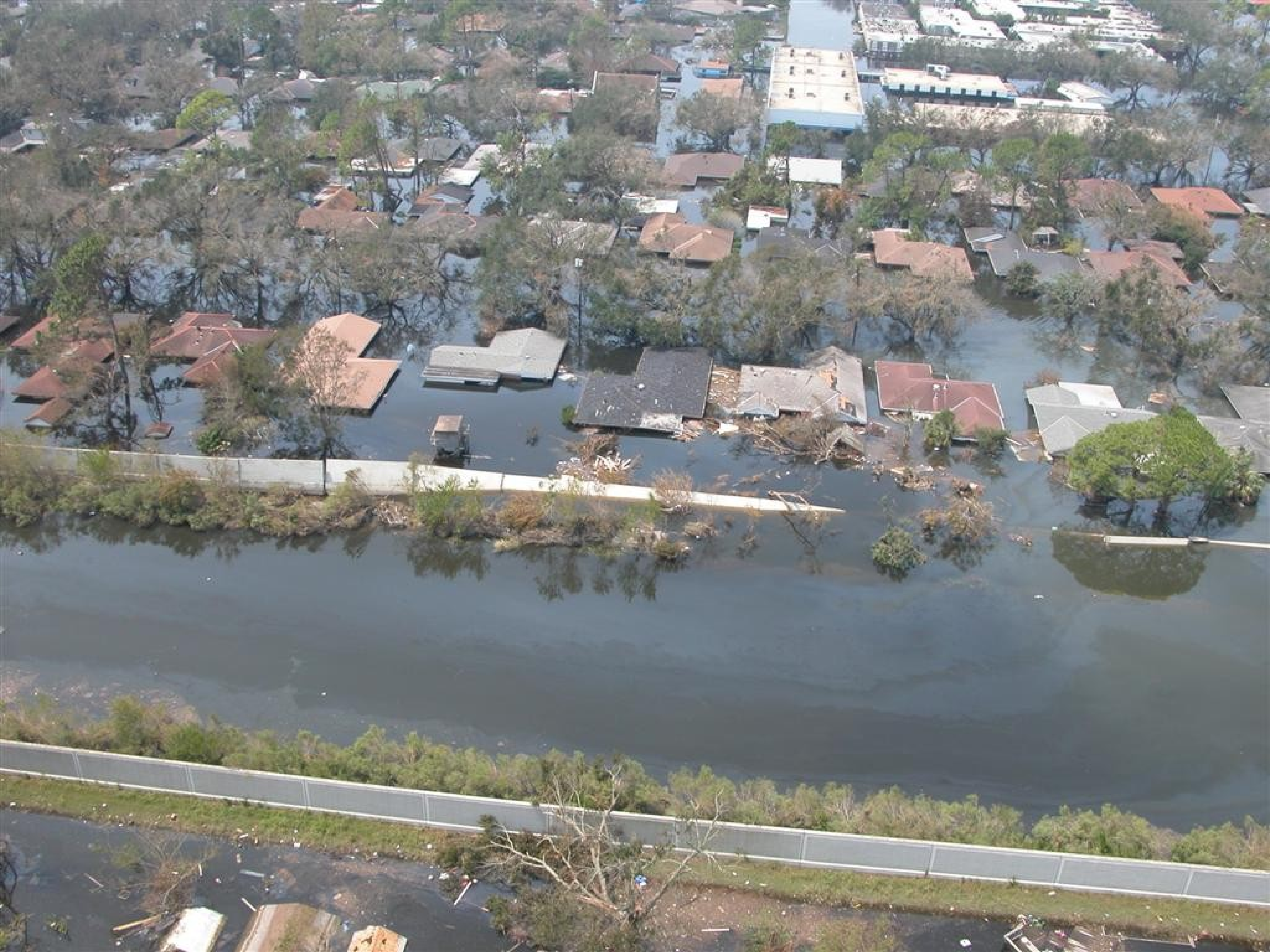
Basic Strategy

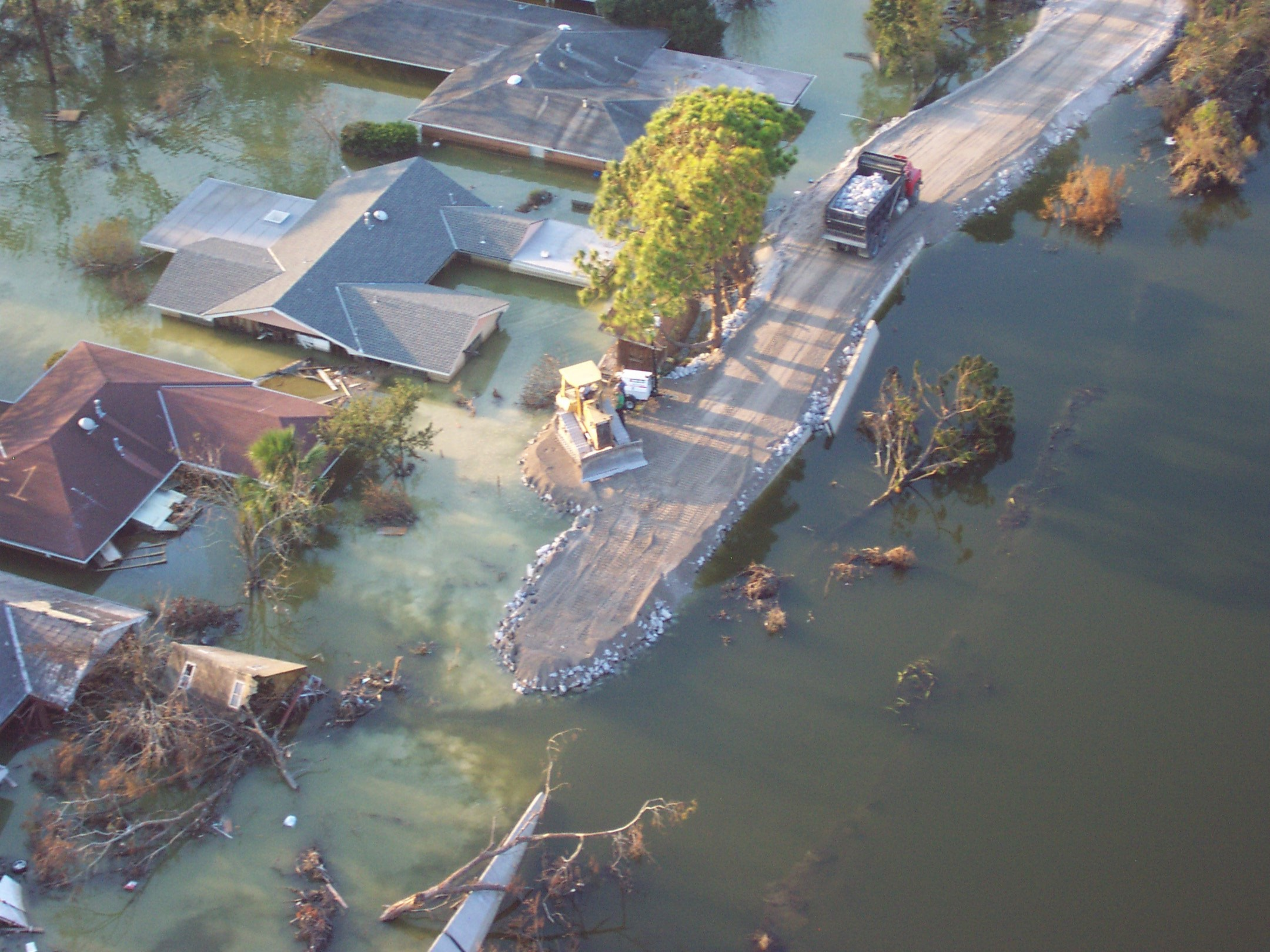
RESULTS

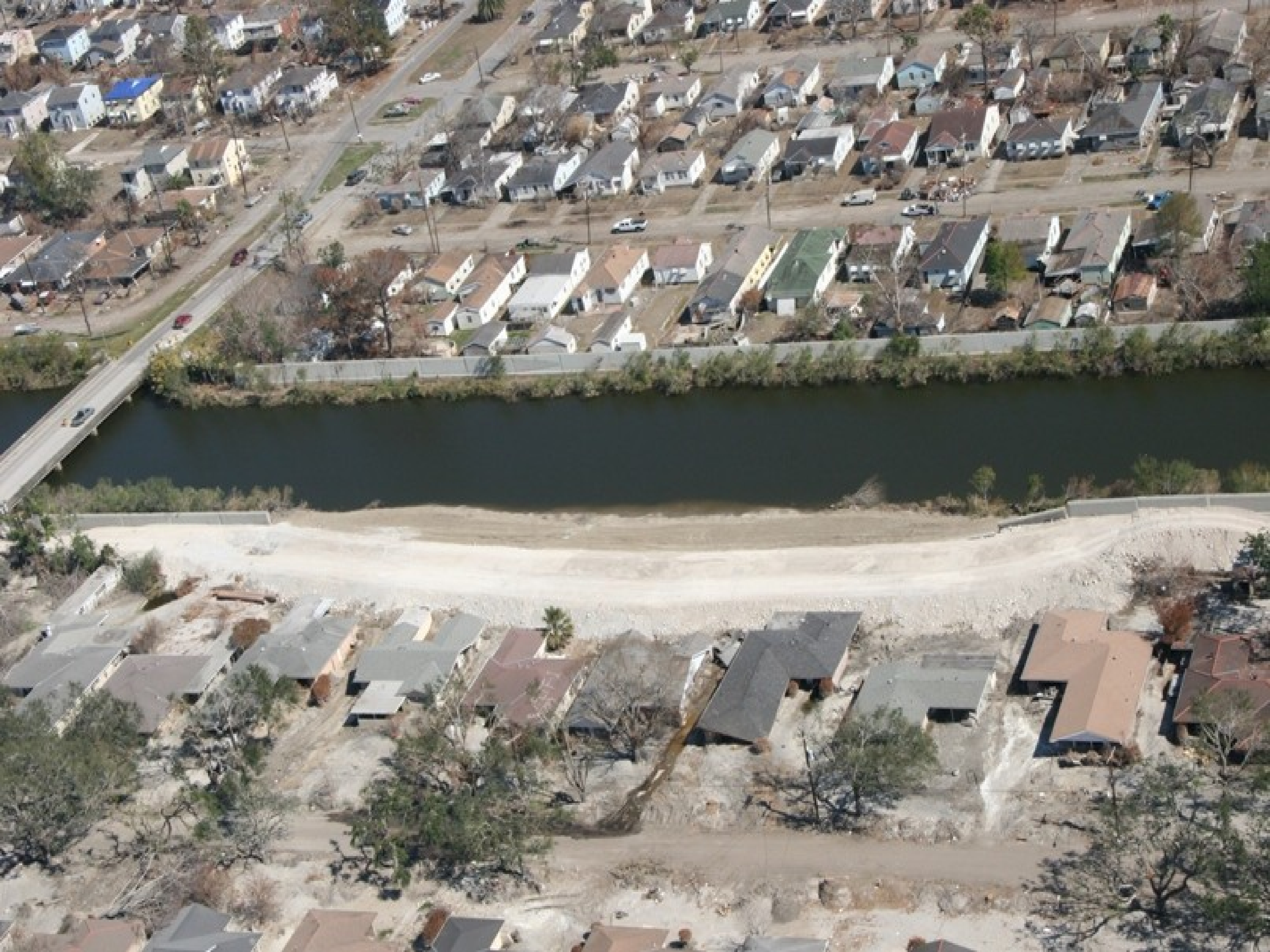


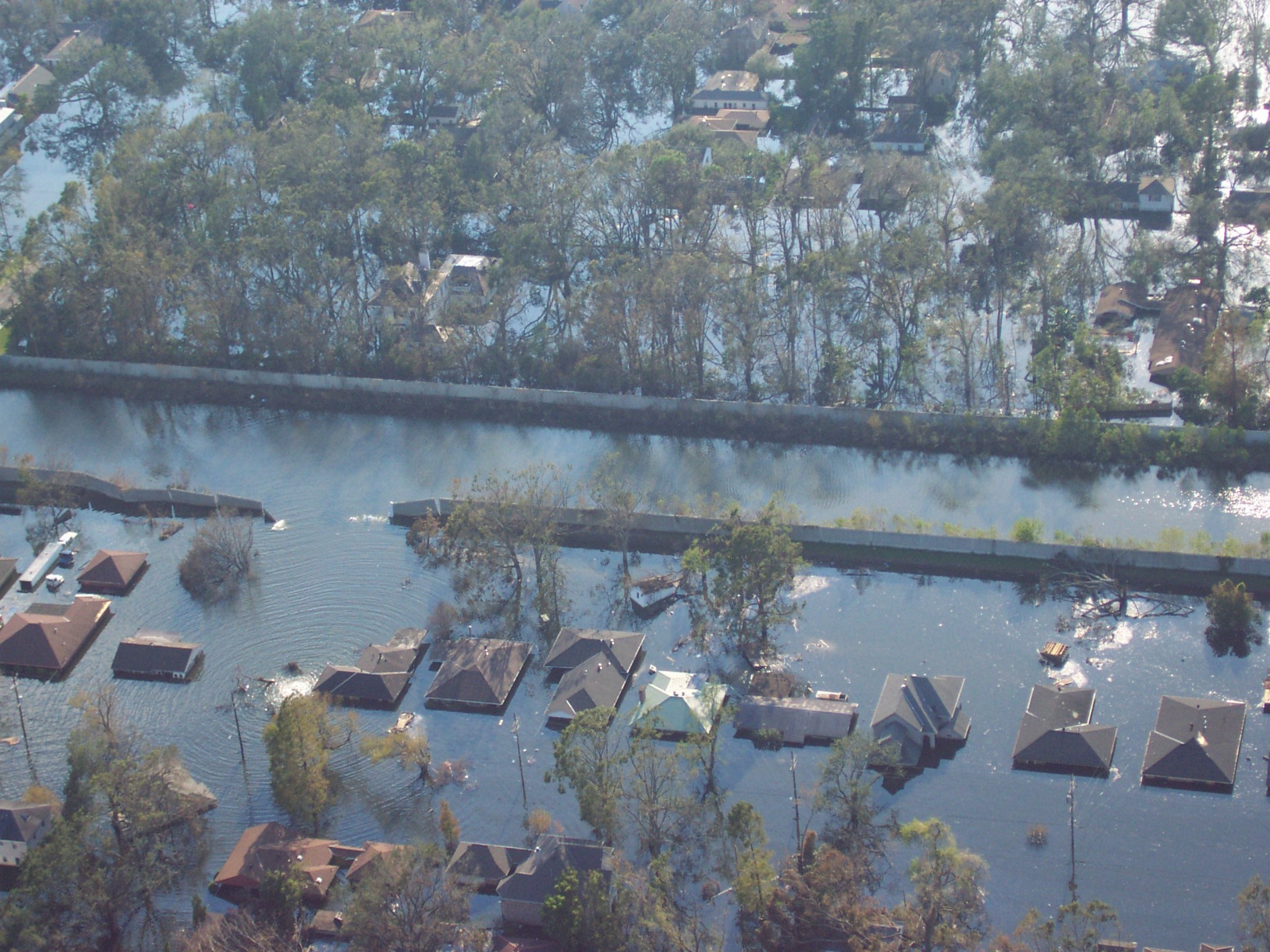


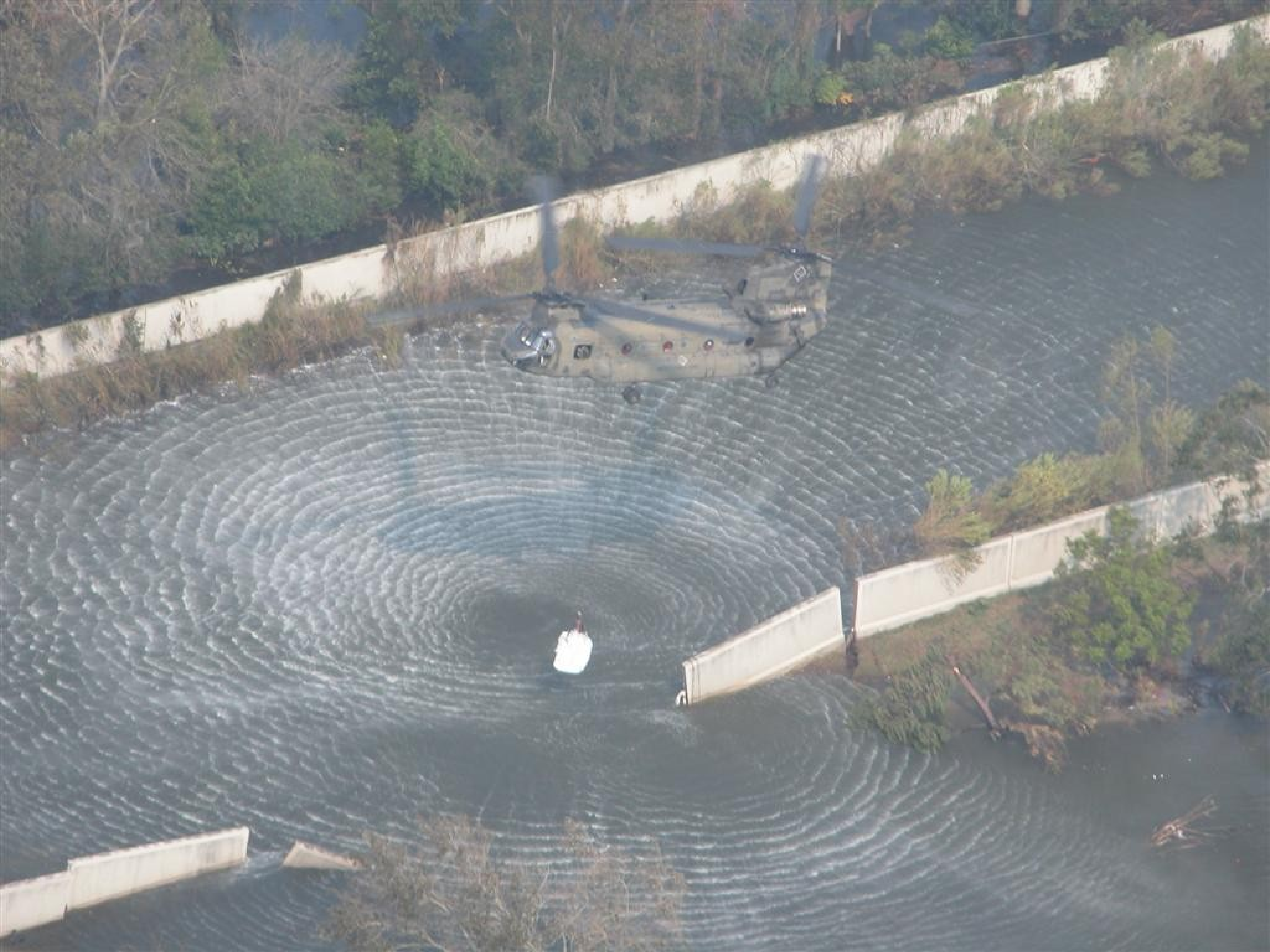


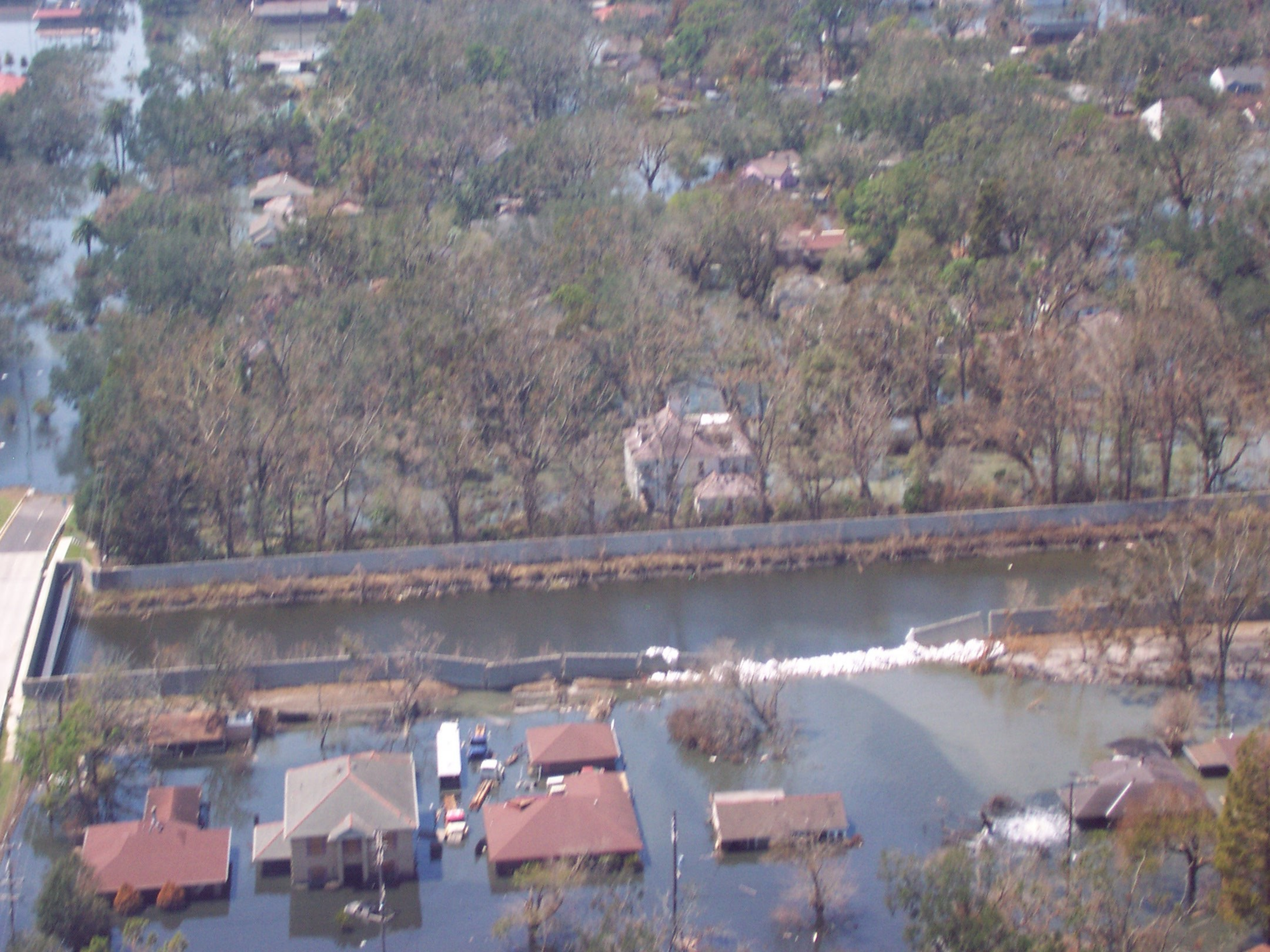


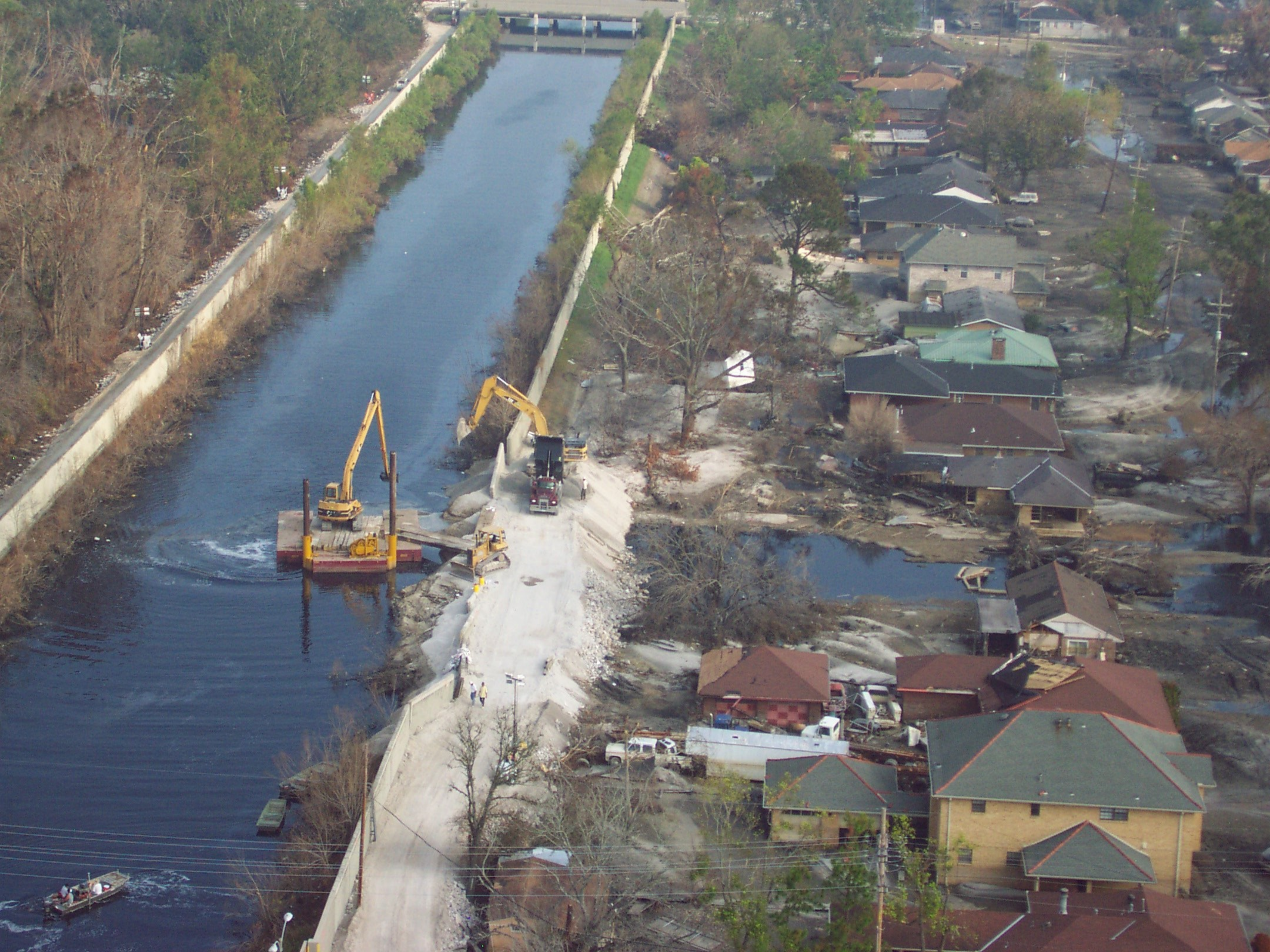


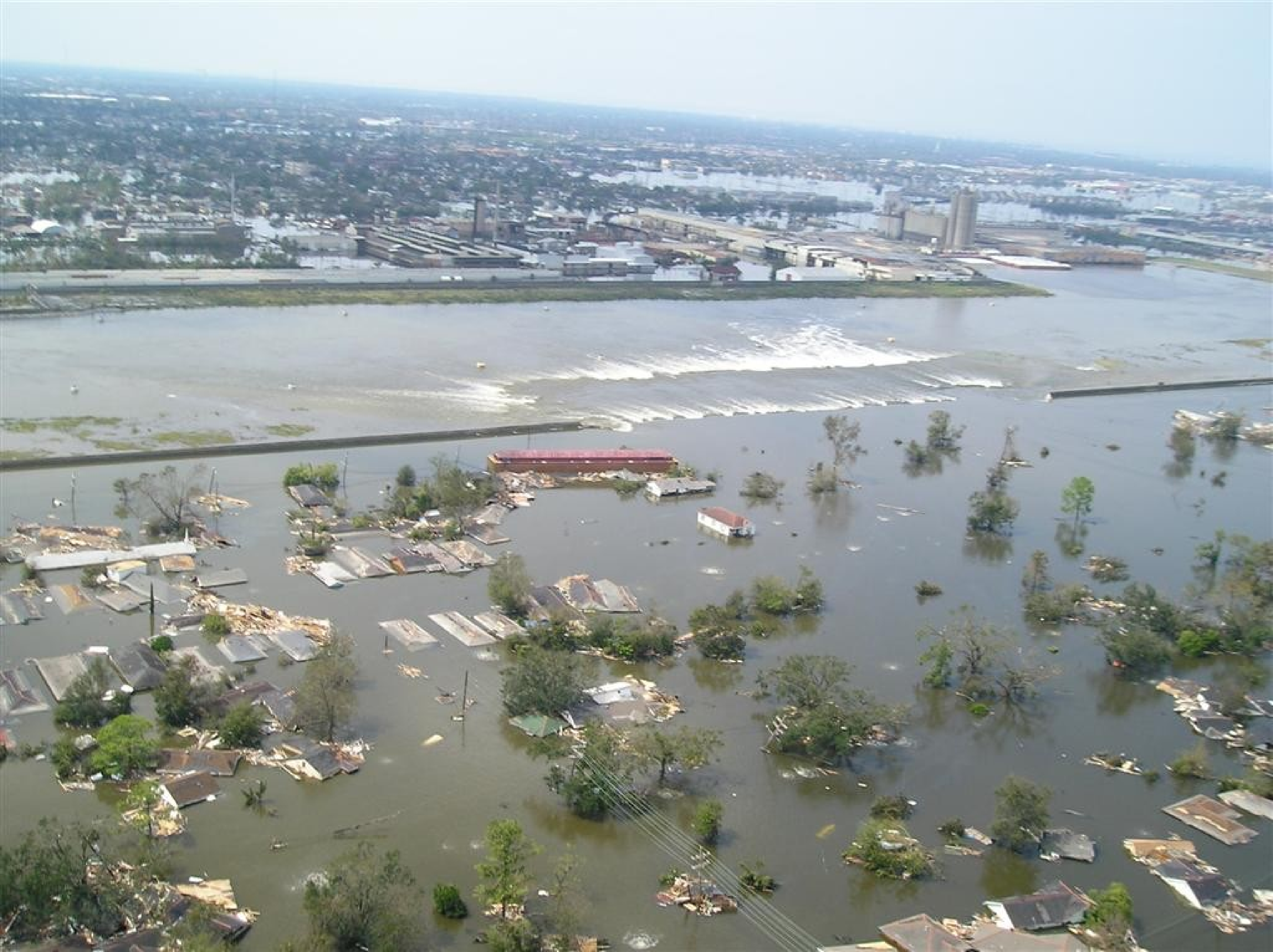


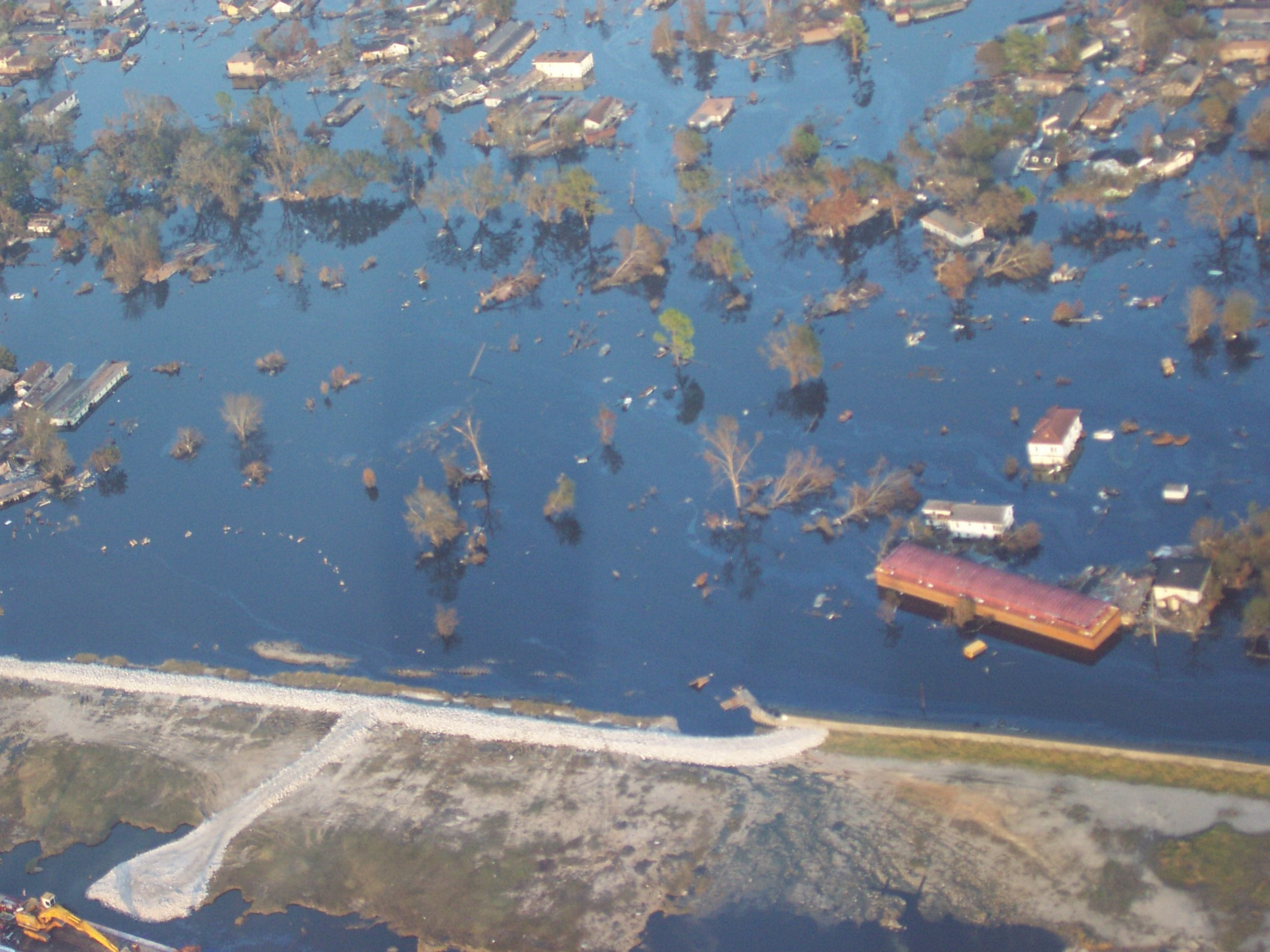


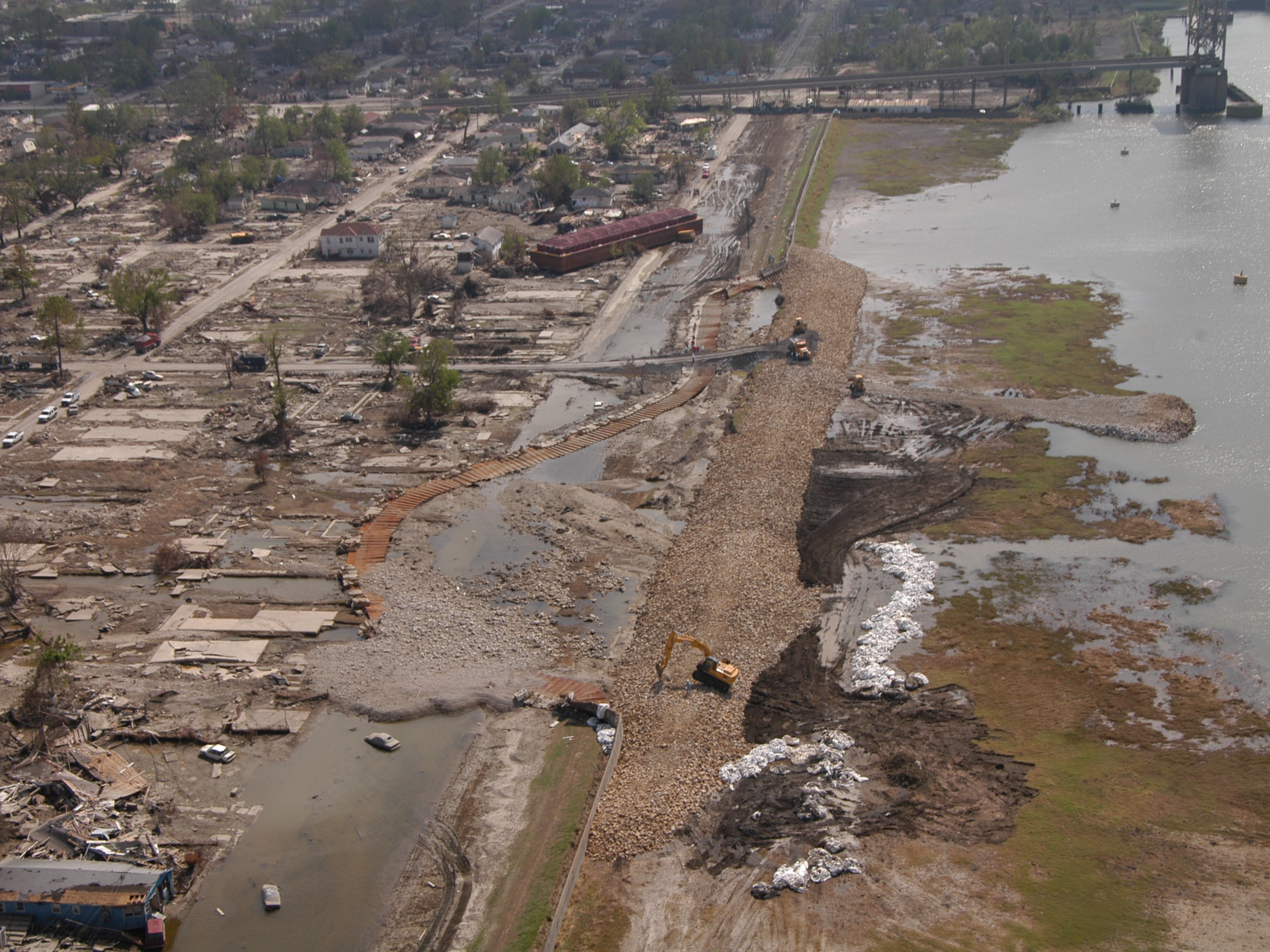


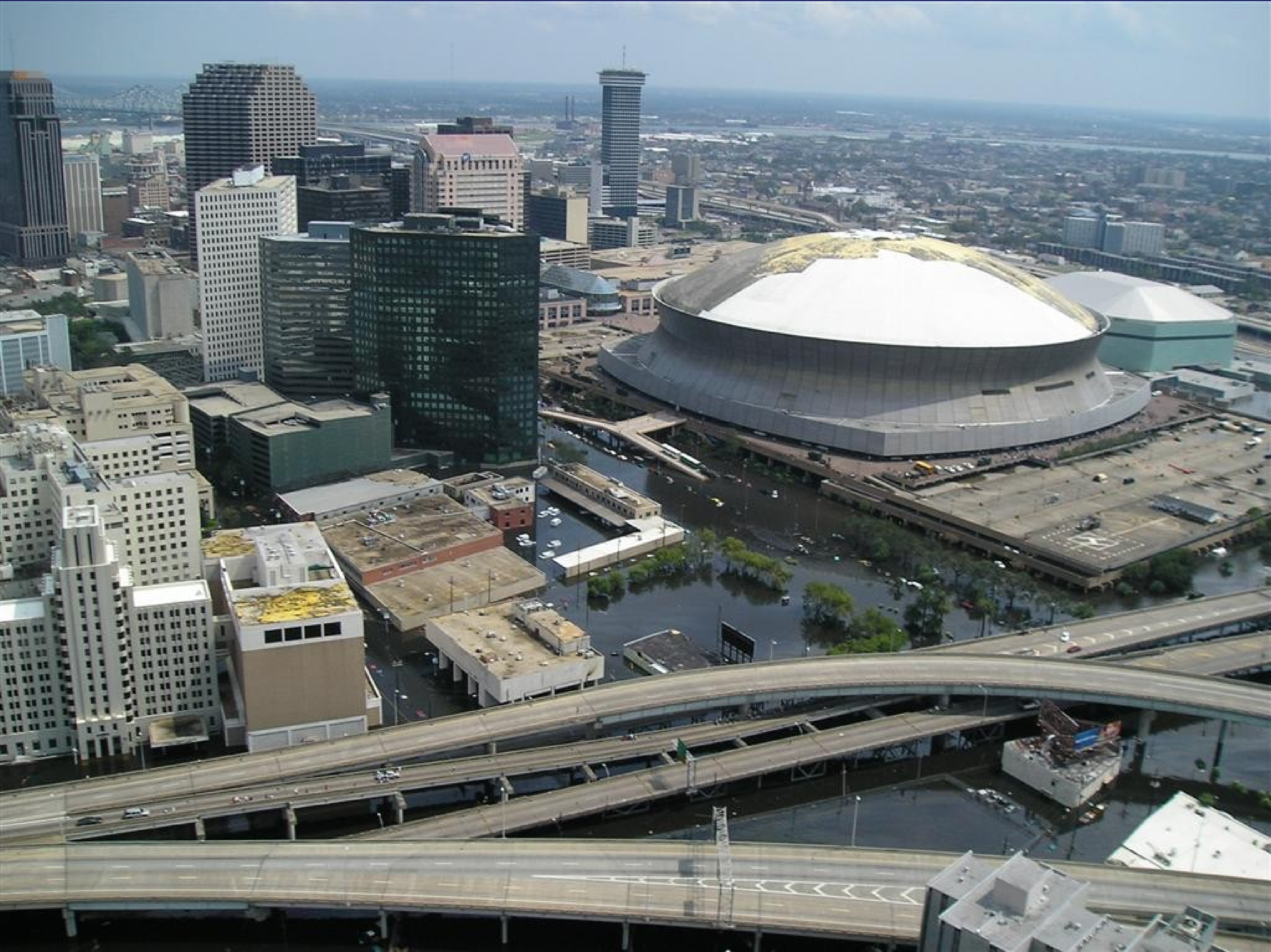


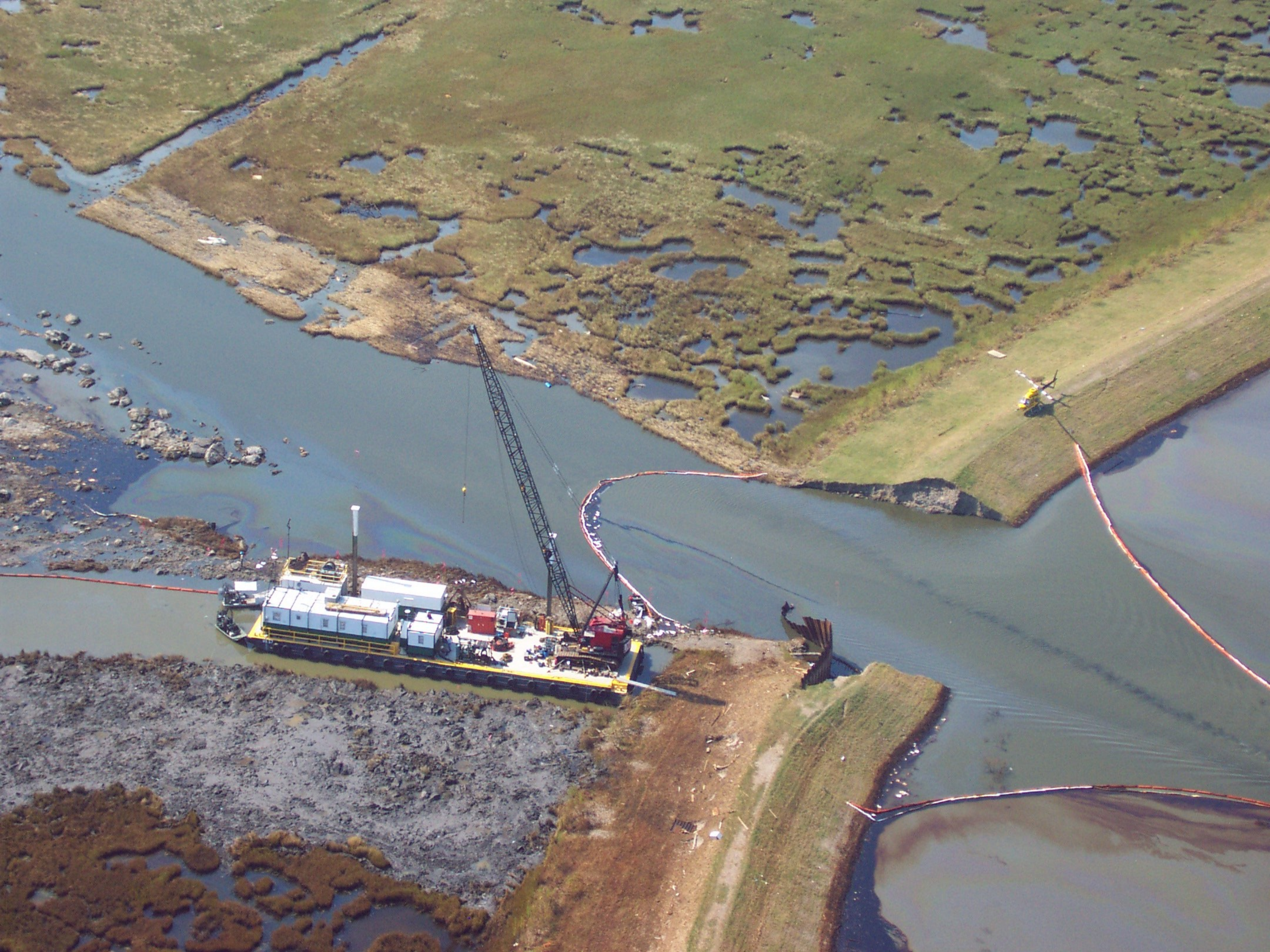


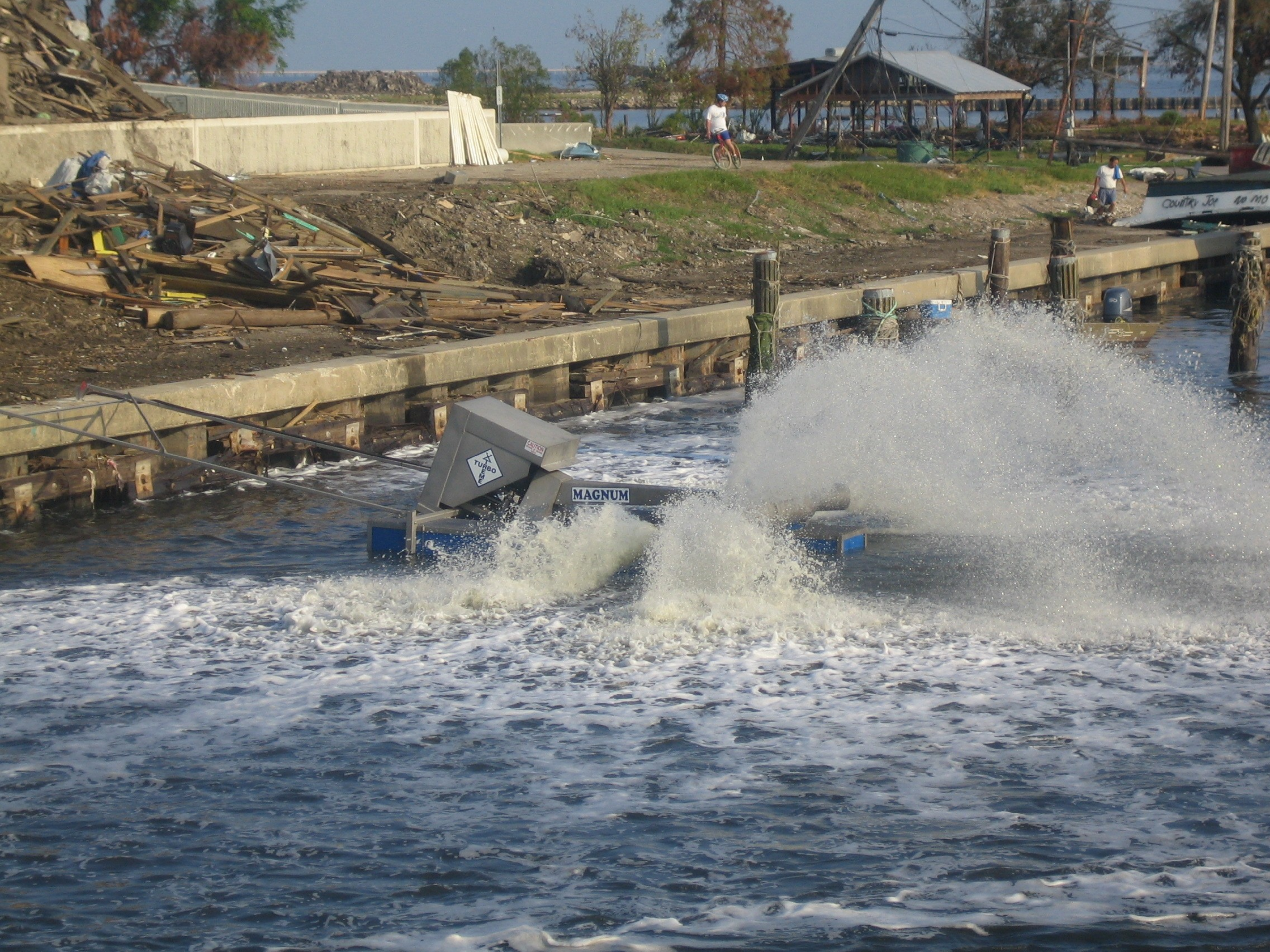











TURBO
CAUTION
MAGNUM
Country Joe

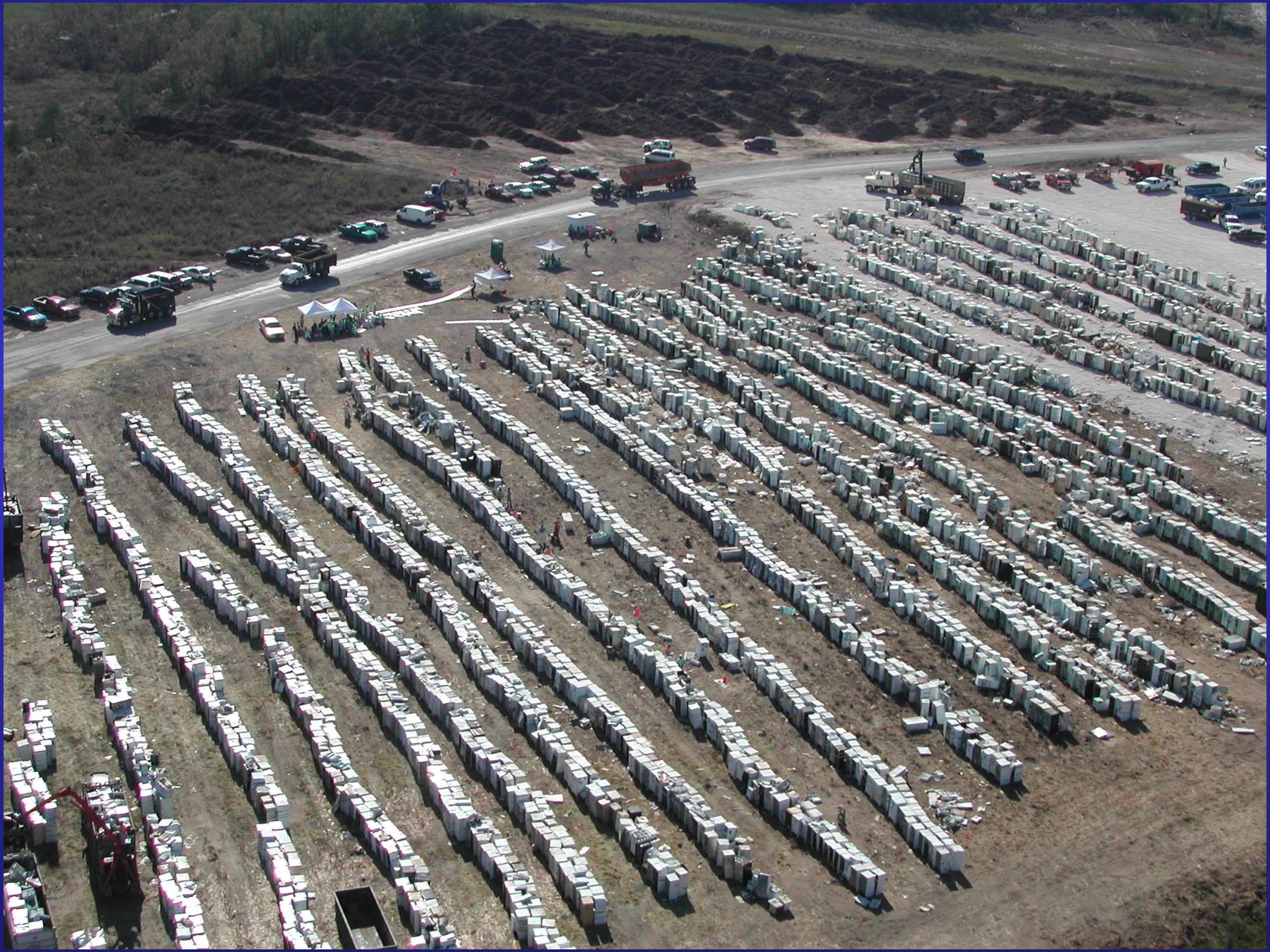
Drained 250+ Billion Gallons of Water

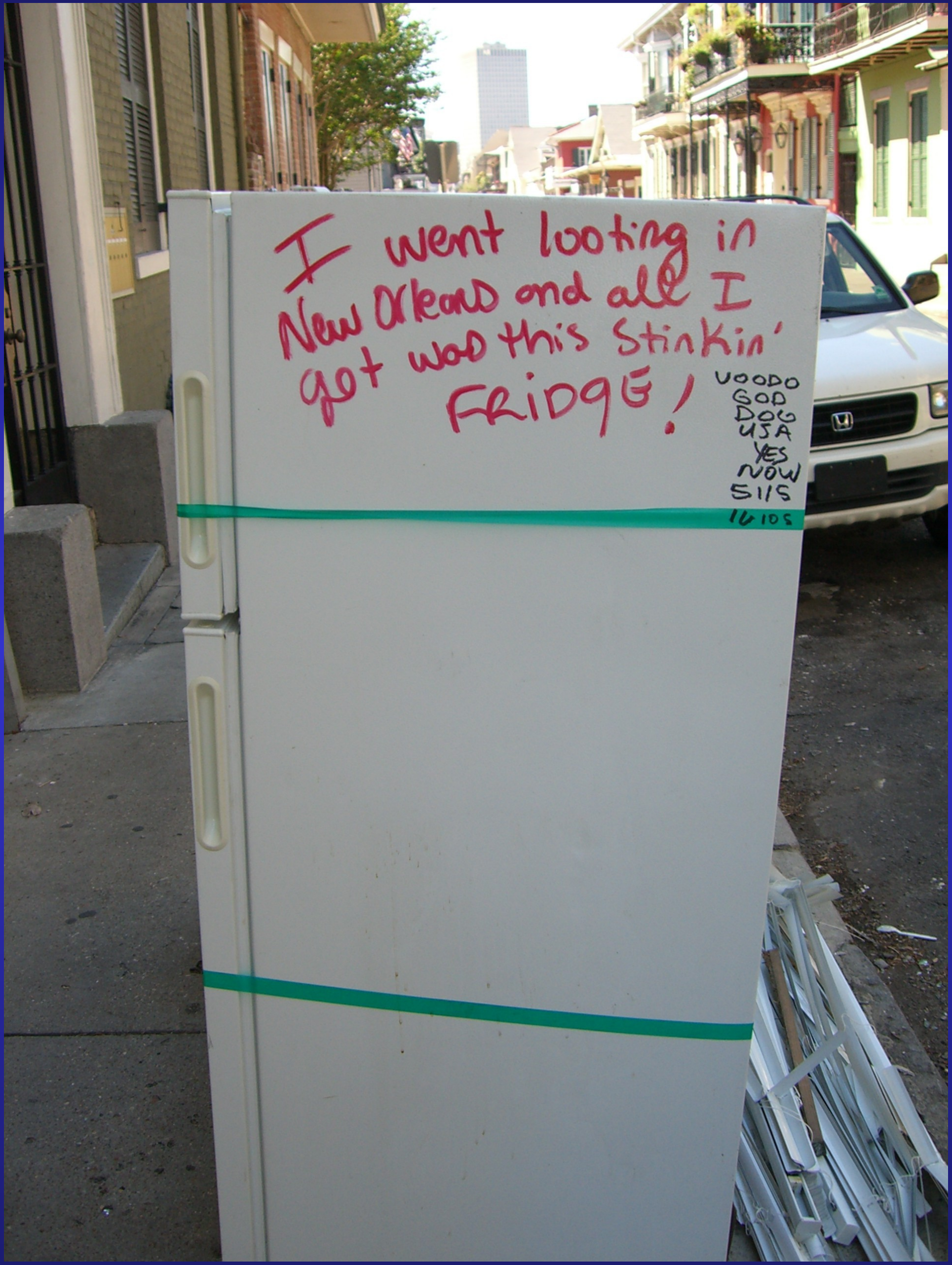
Repaired Nine Major Breaches

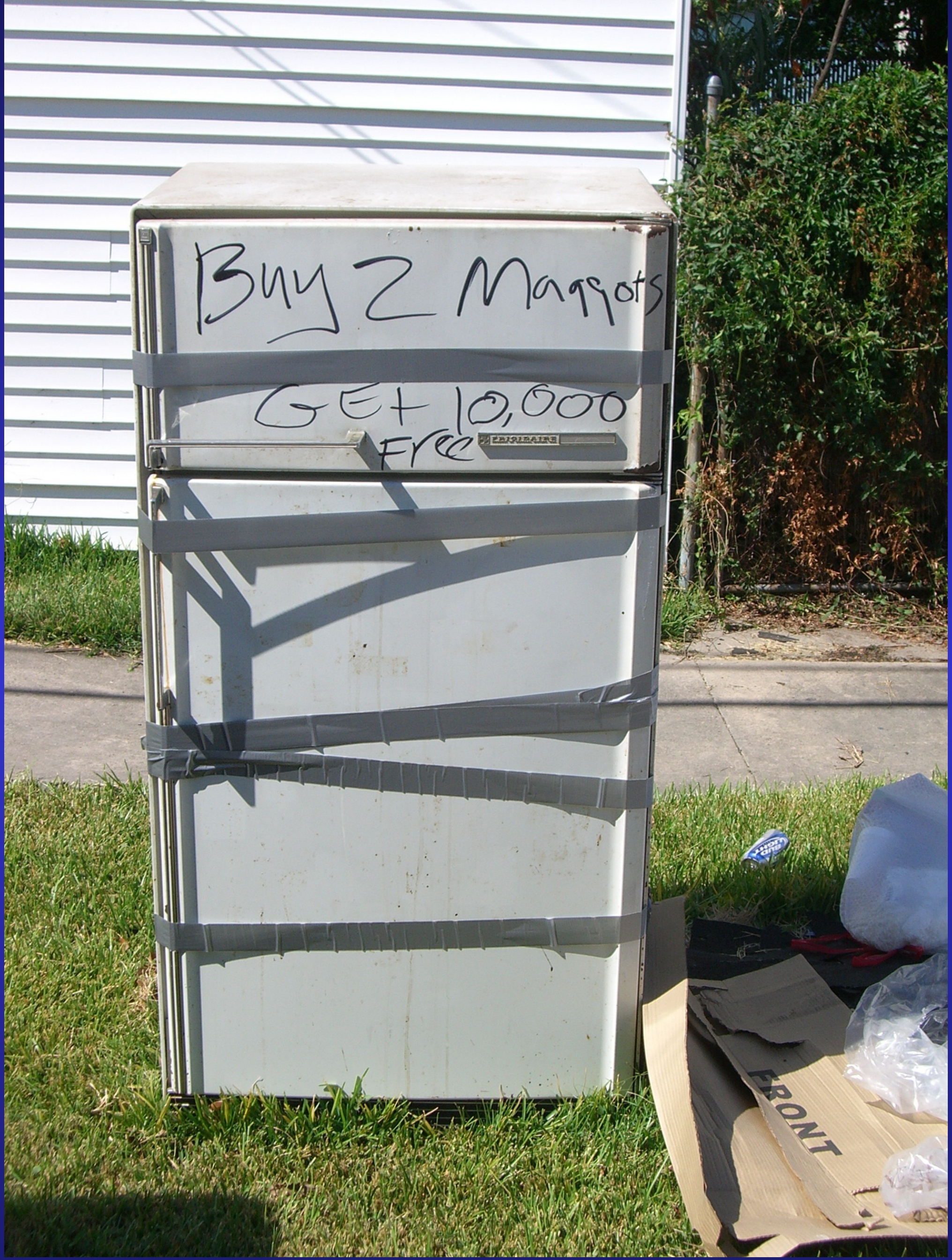
Provided Near Term Protection

The Big Easy

Refrigerator Graveyard




I went looting in
New Orleans and all I
got was this Stinkin'
FRIDGE!
VOODO
GOD
DOG
USA
YES
NOW
5/15
16105

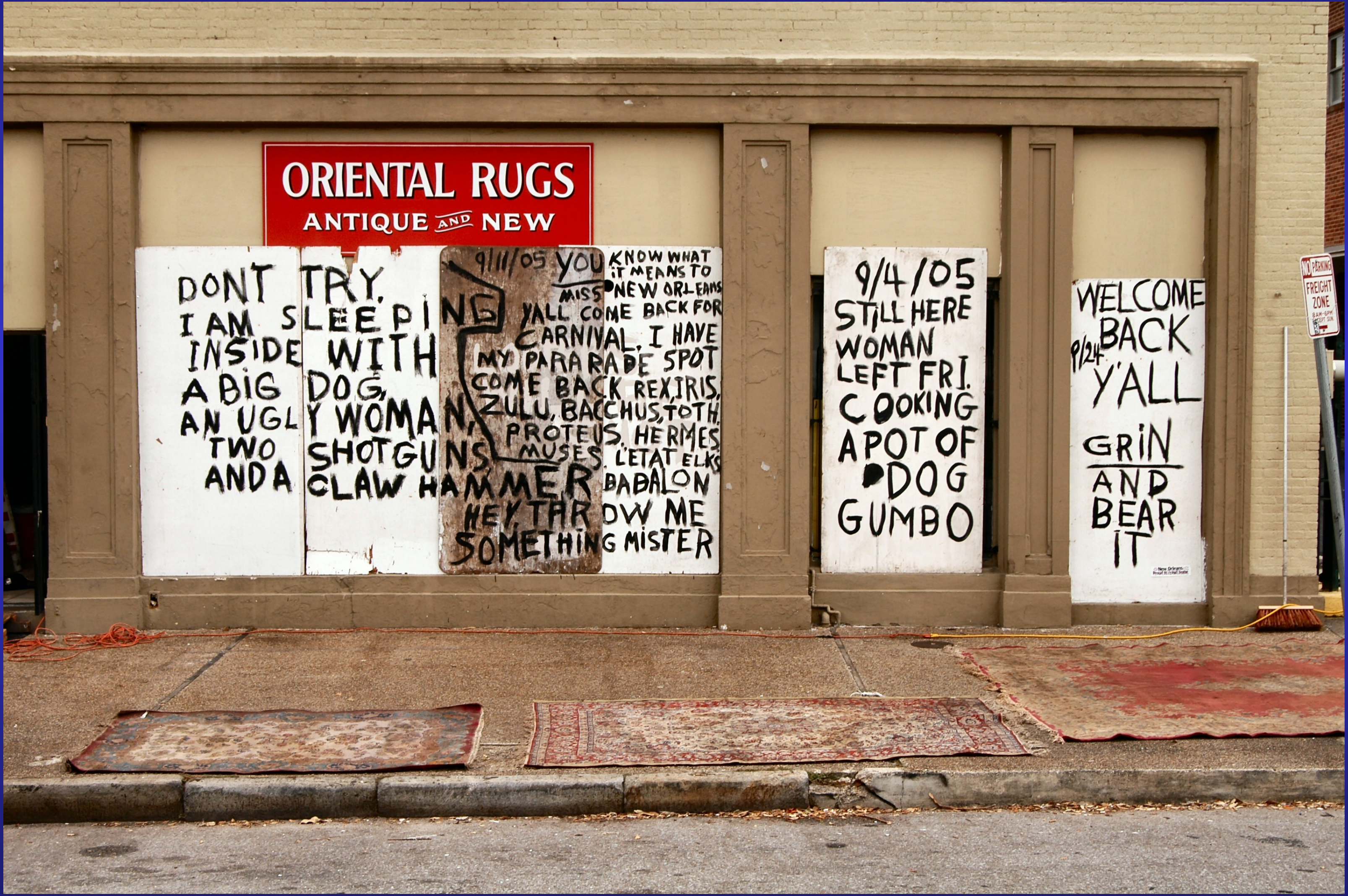

Buy 2 Maggots
Get 10,000
Free
FRIGIDAIRE
FRONT

MY
TUMMY
HURTS

Canon
CABLE CROSSING
U.S.ARMY

CNN
Hi MITC
xoxoxo
-Soledad

Hi Mitc
xoxoxo
-Soledad


ORIENTAL RUGS
ANTIQUE AND NEW
DONT TRY.
I AM SLEEPING
INSIDE WITH
A BIG DOG,
AN UGLY WOMAN,
TWO SHOTGUNS
AND A CLAW HAMMER
9/11/05 YOU KNOW WHAT IT MEANS TO MISS NEW ORLEANS
YALL COME BACK FOR
CARNIVAL. I HAVE
MY PARARADE SPOT
COME BACK REX, IRIS,
ZULU, BACCHUS, TOTH,
PROTEUS, HERMES,
MUSES, L'ETAT ELKS
BABALON
HEY THROW ME
SOMETHING MISTER
9/4/05
STILL HERE
WOMAN
LEFT FRI.
COOKING
A POT OF
DOG
GUMBO
WELCOME
9/24 BACK
Y'ALL
GRIN
AND
BEAR
IT
NO PARKING
FREIGHT
ZONE